3697.

SUPREME COURT OF THE UNITED STATES.

No. 113.

ERASTUS CORNING, JOHN F. WINSLOW, AND JAMES HORNER, APPELLANTS,

vs.

THE TROY IRON AND NAIL FACTORY.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES, FOR THE NORTHERN DISTRICT OF NEW YORK.

INDEX.

	Original.	Print.
Petition of appeal	1	1
Citation	3a	1
Service of citation	5a	2
Clerk's certificate	6a	2
Bill of complaint	3	3
Answer of defendant	16	15
Exhibits referred to in answer	28	28
Replication to answer	33	32
Commission to take testimony	33	33
Complainant's exhibit, No. 1	34	34
Defendants' testimony	63	63
Deposition of Henry Burden and al., for complainant	86	86
Defendants' further testimony	104	103
Defendants' exhibits	105	105
Complainant's exhibits	176	177
Decree	192	192

GIDEON, print.

To the Supreme Court of the United States of America.

The petition of Erastus Corning, John F. Winslow, and James Horner, respectfully represents, that a decree was lately made in the circuit court of the U. States, for the northern district of New York, in equity, bearing date the fourth day of September, 1850, in a certain cause pending in said court, wherein the Troy Iron and Nail Factory were complainants, and your petitioners were defendants; certain parts of which decree, as hereinafter specified, are, as your petitioners are advised, erroneous, and ought to be reversed.

And your petitioners further show, that the matters in dispute in said cause, exclusive of costs, exceed the sum of two thousand dollars; whereupon your petitioners pray that the said decree, together with the pleadings, depositions, and all other proceedings in said cause, may be sent to the said Supreme Court of the United States, and filed therein on the first Monday of December next, and that so much, or such parts of said decree as declares, orders, adjudges, and decrees, as follows, to wit, "And it appearing to the said court that the said Henry Burden was the first and original inventor of the improvement on the spike machine in the bill of complaint mentioned, and for which a patent was issued to the said Henry Burden, bearing date the 2d September, 1840, as in said bill of complaint set forth, and that the said complainants have a full and perfect title to the said patents for said improvements, by assignment from the said Henry Burden, as is stated and set forth in the said bill of complaint," may be reversed, and that the appellants may be restored to all things which they have lost by reason thereof.

Dated Troy, September 8th, 1853.

DAVID L. SEYMOUR,
Solicitor for appellants.

By the honorable Samuel Nelson, one of the judges of the circuit court of the United States, for the northern district of New York.

Whereas Erastus Corning, John F. Winslow, and James Horner, lately filed in the circuit court of the United States, for the northern district of New York, a petition of appeal, directed to the Supreme Court of the United States of America, stating that a decree was lately made in the circuit court of the United States, for the northern district of New York, in equity, bearing date the fourth day of September, 1850, in a certain cause therein pending, wherein the Troy Iron and Nail Factory were complainants, and Erastus Corning, John F. Winslow, and James Horner were defendants, certain parts of which said decree are alleged to be erroneous, and ought to be reversed; and further stating, that the matters in dispute in said cause, exclusive of costs, exceeded in value the sum of two thousand dollars.

[Rec. cxiii, D. T., 1853.]—1

And whereas the said Erastus Corning, John F. Winslow, and James Horner, by their said petition, prayed that the said decree, together with the pleadings, depositions, and all other proceedings in said cause, may be sent to the said Supreme Court of the United States, and filed therein on the first Monday of December next; and that the said parts of said decree may be reversed, and the said appellants restored to all things which they have lost by reason thereof.

You are, therefore, hereby cited to appear before the said Supreme Court of the United States, at the city of Washington, on the first Monday of December next, to do and receive what may appertain to justice to be done in the premises.

Given under my hand, in the circuit court of the United States, for the northern district of New York, the 23d day of September, 1853.

S. NELSON.

STATE OF NEW YORK,
Northern district, ss.

John L. Blanchard, of Rensselaer county, in said district, being duly sworn, says, that on this 5th day of October inst. he personally served on Henry Burden, president of the Troy Iron and Nail Factory, at his office in Troy, the annexed citation on appeal, by delivering to him a copy thereof, and at the same time showing him the original. And at the same time and place deponent, in like manner, served on said Burden a copy of the annexed petition of appeal.

JNO. L. BLANCHARD.

Sworn before me, this 5th day of October, 1853.

HENRY A. CHUN,
Clerk of Rensselaer county.

CIRCUIT COURT OF THE UNITED STATES,
Northern district of New York.

THE TROY IRON AND NAIL FACTORY, appellees,
vs.
ERASTUS CORNING, John F. Winslow, and James Horner, appellants.

UNITED STATES OF AMERICA,
Northern district of New York, ss.

I, Augustus A. Boyce, clerk of the circuit court of the United States of America, in and for the northern district of New York, in the second circuit, do hereby certify, to the Supreme Court of the United States, that the decree, pleadings, depositions, and other proceedings in the above entitled cause hereunto annexed, are true transcripts of the originals remaining on the files of my office in the said cause.

In testimony whereof I have hereunto subscribed my name, and affixed the seal of the said court, at my office, in Utica, this 26th day of October, in the year of our Lord one thousand eight hundred and fifty-three, and of the independence of the United States the seventy-eighth.

[L. S.]

AUG'S A. BOYCE,
Clerk of the circuit court of the U. S., for the northern district of New York.

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York, in equity.

To the judges of the circuit court of the United States, for the northern district of New York.

The Troy Iron and Nail Factory, a manufacturing corporation, le-
fol. 3) gally incorporated, located and established at the city of Troy, in the county of Rensselaer, and State of New York, and district aforesaid, and a citizen of said State, brings this bill against Erastus Corning, James Horner, and John F. Winslow, said Corning and Horner being of Albany, and said Winslow of Troy, and all of the district aforesaid, and citizens of said State, complains and says: That on the 20th day of July, in the year 1835, your orator was duly created a body politic and corporate, under and by virtue of, and pusuant to,
fol. 4) the act of the legistature of the State of New York, entitled an act relative to incorporations for manufacturing purposes, passed March 22d, 1811, and the acts continuing and amending the same, for the purpose of conducting and carrying on the business of manufacturing nail-rods, hoop-iron, cut-nails, and spikes, and forming and making all kinds of machinery, tools, and implements, and wares, made, used, or improved, in and about manufactories established for such purposes, at the said city of Troy, under the corporate name aforesaid, as will
fol. 5) more fully appear by the certificate in writing, filed in the office of the Secretary of State of the State of New York, on the said 20th day of July, in the year 1835, as required by the said acts above mentioned, which your orator is ready and willing to produce when and where this court shall direct, and to which your orator for greater certainty prays leave to refer.

That the said corporation above mentioned, immediately after its creation as aforesaid, was duly organized, and commenced the business for which it was incorporated, and has been ever since, and still is
fol. 6) a body politic and corporate, exercising all its corporate powers, under and by virtue of the said acts of the legislature of the State of New York, above referred to, at the city of Troy aforesaid.

And your orator further shows, that previous to the 2d day of December, in the year 1834, one Henry Burden, then and still of the city of Troy, in the county of Rensselaer, and State of New York, became and was the inventor and discoverer of a new and useful improvement in the machinery for manufacturing wrought nails or spikes,

fol. 7) and being a citizen of the United States, made application in due form of law to the Patent Office of the United States for letters patent for his said invention, in the manner prescribed by and according to the provisions of the acts of Congress in such case made and provided, and complied with all the provisions of the said acts of Congress in relation to such application; and such proceedings were thereupon had, that on or about the 2d day of December, in the year 1834, fol. 8) letters patent were granted to the said Henry Burden, for his said improvement, in due form of law, which said letters patent so granted as aforesaid in due form of law, to the said Henry Burden, bear date the 2d day of December, in the year 1834, and a copy of which is hereto annexed, marked schedule A, which your orator prays may be taken as a part of his bill, the original of which your orator is ready and willing to produce and prove, as this honorable court shall direct, and to which, when produced, your orator for greater certainty prays leave to refer.

fol. 9) And your orator further shows, that after the said Henry Burden had obtained his said letters patent for his said invention as above mentioned, and on or about the 2d day of December, in the year 1836, he, the said Henry Burden, for a valuable consideration, by a certain instrument in writing, duly executed by him, and bearing date the day and year last above mentioned, did grant, bargain, sell, assign, and transfer unto your orator the said letters patent so granted to him as aforesaid, together with all the rights and privileges granted fol. 10) and secured thereby; and did, in and by the said instrument in writing, covenant and agree, to and with your orator, that if he, the said Henry Burden, should thereafter make any improvement in or upon his said invention, for which he had obtained his said letters patent above mentioned, he would grant and convey the same to your orator, as by the said instrument in writing duly executed by the said Henry Burden, ready to be produced, when and where this honorable court shall direct, will more fully appear, and to which your orator f. 11) prays leave to refer for greater certainty, and which was duly recorded in the Patent Office at the city of Washington, on the 13th day of August, in the year 1839.

And your orator further shows, that in and by the specification annexed to, and forming a part of, the said letters patent so granted to the said Henry Burden as aforesaid, the said improvement so invented and discovered by the said Henry Burden, and for which the said letters patent were so granted as aforesaid, is fully described and set forth, in f. 12) such full, clear, and exact terms as to distinguish it from all other improvements before known or used ; and that the said improvement, for which said letters patent were so granted as aforesaid, is of great value, and has been and still is used by your orator in the prosecution of its business to great advantage.

And your orator further shows, that the said Henry Burden, having become the inventor and discoverer of new and useful improvements in the machinery for making hook or brad-headed spikes, made appli-

cation to the Patent Office of the United States on the 18th day of
f. 13) April, in the year 1839, for letters patent, for his said last mentioned improvements, in the manner prescribed by, and according to, the provisions of the act of Congress in such case made and provided, and fully complied with all the provisions of said acts of Congress to entitle him to such letters patent. And such proceedings were thereupon had, upon said last mentioned application, that on the 2d day of September, in the year 1840, letters patent were duly granted to the said Henry Burden for his said last mentioned improvements, in due
f. 14) form of law, which said patent, bearing date the 2d day of September, in the year 1840, under the seal of the Patent Office of the United States, was duly signed by J. L. Martin, then acting Secretary of State of the United States, and countersigned by Henry L. Ellsworth, then commissioner of patents of the United States, and recorded in the said Patent Office, all in due form of law, as will fully and at large appear by a copy of said patent hereto annexed, marked schedule
f. 15) B, which your orator prays may be taken as a part of this his bill of complaint, and by the original patent, or an exemplification of the record thereof, ready to be produced, as this court shall direct, and to which for greater certainty your orator prays leave to refer.

And your orator further states and shows, that in and by the specification annexed to and making a part of the said last mentioned patent, the said last mentioned improvements, so invented and discovered by the said Henry Burden, and for which the said last mentioned patent was granted to him as aforesaid, are fully described and set forth in
f. 16) such full, clear, and exact terms as to distinguish them from all other improvements before known or used, as by the said specification will fully appear, and to which your orator for greater certainty prays leave to refer.

And your orator further states and shows, that under and by virtue of the covenant and agreement between your orator and the said Henry Burden, bearing date the 2d day of December, in the year 1836, herein before mentioned, and in substance set forth, your orator became entitled to the said improvements for which the said last mentioned patent
f. 17) was granted to the said Henry Burden, as above mentioned, and to all the rights and privileges granted and secured thereby, of the value of over three hundred and fifty thousand dollars; and that the said Henry Burden, in pursuance of his said covenant and agreement with your orator, herein before mentioned, and in consideration thereof, after obtaining the said last mentioned patent, by an instrument in writing duly executed by him, did grant, bargain, sell, assign, and transfer to your orator the said last mentioned patent so granted to him as last
f. 18) above mentioned, together with all the rights and privileges granted and secured thereby; whereby your orator became and was and ever since has been, and still is, the sole and exclusive owner of the said last mentioned patent, and of all the rights and privileges granted and secured thereby, as by the said last mentioned instrument in writing, which has been duly recorded in the Patent Office of the

United States, which your orator is ready and willing to produce and prove when and where this court shall direct, will fully appear, and to which for greater certainty your orator prays leave to refer.

f. 19) And your orator further shows, that having thus become the exclusive owner of the said last mentioned patent, and of the rights and privileges granted and secured thereby, your orator expended large sums of money in making the machinery containing the improvements mentioned and described in the said last mentioned patent, and bringing said improvements so secured by said patent into use and successful operation; and that from the use of the said improvements your orator was receiving large profits and gains by the manufacture of hook or brad-headed spikes, with the aid of the new and useful improvements f. 20) in the machinery for the manufacture thereof, so invented by the said Henry Burden, and for which the said last mentioned patent was granted to him, as herein before mentioned; and would have continued to realize and receive great gains and profits from the manufacture of said hook or brad-headed spikes under said patent, but for the infringement and violation by the said defendants of the exclusive right granted and secured by the said patent, hereinafter stated and set forth.

And your orator further shows, that after your orator had become f. 21) the sole and exclusive owner of the said patent, so granted to the said Henry Burden, as last aforesaid, and on or about the 15th day of October, in the year 1845, Erastus Corning, James Horner, and John F. Winslow, who have been and still are copartners in business, engaged in carrying on the iron and nail business at the city of Troy, in the county of Rensselaer, their works at the said city of Troy being known and called "The Albany Iron and Nail Works," erected, and caused and procured to be erected, and put in use, in their said iron f. 22) and nail works in the city of Troy, four or five machines for the manufacture of hook or brad-headed spikes, containing the said new and useful improvements so invented by the said Henry Burden as aforesaid, and for which the said letters patent were granted to him, as hereinbefore mentioned, and have been engaged ever since the said 15th day of October, in the year 1845, and still are engaged in manufacturing the said hook or brad-headed spikes with the said machines containing the said new and useful improvements aforesaid, in viola- f. 23) tion of the exclusive rights and privileges of your orator, granted and secured by the said letters patent last above mentioned, to the great injury and damage of your orator in the premises, whereby the defendants have also made to and for themselves in profits a large sum of money, which the complainant states and charges to be not less than one hundred thousand dollars.

And your orator further shows unto your honors, that the said Erastus Corning, James Horner, and John F. Winslow, the defendants to this your orator's bill of complaint, reside, the said Corning and Horner f. 24) in the city of Albany, and the said John F. Winslow in the city of Troy, and own, conduct, and carry on the said Albany Iron

and Nail Works at the said city of Troy, and have on hand large quantities of the said hook or brad-headed spikes, manufactured by them with the said machines, containing the said new and useful improvements so constructed and put in use by them, in violation of your orator's rights secured by said patent as hereinbefore mentioned, and are threatening to sell and are selling the same in violation of the rights of f. 25) your orator, and to the great injury and damage of your orator's business, as your orator states and charges, to the amount of over one hundred thousand dollars.

And your orator further shows, that your orator has caused applications to be made to the said defendants, and requested them to desist and refrain from any further violations of your orator's rights, so secured under and by virtue of the said letters patent as aforesaid, and to account to your orator for the profits by them made, and the damages sustained by the unlawful use by them of the said improvements, f. 26) which the said defendants wholly refuse to do, but insist on continuing the use of the said machines containing the said new and useful improvements in the manufacture of said hook or brad-headed spikes, and selling and disposing of the same in violation of your orator's rights under said patent, and to the great and irreparable injury and damage of your orator's said business as above stated; and as a reason for such conduct the said defendants sometimes pretend that the said Henry Burden was not the first inventor or discoverer of the said improvements for which he obtained his said letters patent, bear- f. 27) ing date the 2d day of September, in the year 1840, as hereinbefore mentioned; and that the use of said improvements by the said defendants was not an infringement upon, or a violation of, any right granted or secured by said patent; whereas, your orator charges the contrary of such pretence to be the truth.

And your orator also charges and avers, that the said Henry Burden, in the year 1842, commenced an action at law in this court against the said defendants for an infringement and violation of the rights granted f. 28) and secured by said patent, which was resisted by the said defendants on the ground that said Burden was not the first inventor of improvements for which said patent was granted; that said action at law was tried at the October term of this court in the year 1842, and resulted in a verdict in favor of the plaintiff for $700; that the said defendants took a bill of exceptions on the trial of the said cause, and made a motion for a new trial, which motion, after having been fully f. 29) argued before this court, was, at the June term thereof, in the year 1843, denied with costs, and leave given to said Henry Burden to perfect judgment on the said verdict, and a judgment thereon was duly perfected; and thereby the originality of the said invention, for which said patent was granted, and the validity of said patent, was fully established.

And at other times the said defendants pretend that they have a license from the said Henry Burden to use the said improvements for which the said last mentioned patent was granted, and that the use of

f. 30) said improvement by them as above mentioned was under and by virtue of such license.

Whereas your orator charges that the said Henry Burden never gave any such license; and had no power or authority to give such license, your orator having been the legal and equitable owner of the said last mentioned patent, and the rights and privileges granted and secured thereby from the time said patent was granted, and still is the owner thereof, and that the use of the said improvements by the said defendants, as hereinbefore stated, is an infringement upon, and a violation of, the rights of your orator under said patent.

f. 31) All which actings, doings, and pretences of the said defendants are contrary to equity and good conscience, and tend to the manifest injury and oppression of your orator in the premises.

To the end, therefore, that the said defendants may full, true, direct, and perfect answers make to the several interrogatories annexed to this bill, and numbered as they are there numbered, and that the said defendants may be compelled, by the order and decree of this court, to account for the profits by them made as aforesaid, and pay to your ora-

fol. 32) tor the same, and all the damages sustained by your orator, by the unjust and unlawful violation and infringement by the said defendants of your orator's rights and privileges under said patent, and that the said defendants in the mean time be restrained and enjoined, by the order and injunction of this court, from committing any further violations of the said patent rights of your orator, by making, using, or vending any machine containing the said new and useful improvements for which the said letters patent, bearing date the 2d day of September, 1840, were granted as aforesaid, and from using or vending any spikes

fol. 33) made by them with the said machines, until the further order of this court; and that your orator may have such other or further relief in the premises as the nature of the case may require and shall be agreeable to equity.

May it please this honorable court to grant unto your orator a writ of injunction, to be directed to the said Erastus Corning, James Horner, and John F. Winslow, commanding them, their attorneys, agents, and workmen, to desist and refrain from making, using, or vending any machine containing the new and useful improvements, for which letters

fol. 34) patents were granted to the said Henry Burden, on the 2d day of September, 1840; and from selling, using, or in any manner disposing of any spikes which they now have on hand, that have been manufactured or made by them by the use of any machine containing the said improvements for which said patent was granted as aforesaid; and from in any manner violating or infringing any of the rights or privileges granted or secured by said patent, until the further order of this court.

May it also please this court to grant a writ of subpœna, directed to the

fol. 35) said Erastus Corning, James Horner, and John F. Winslow, commanding them on a certain day, and under a certain penalty therein to be inserted, to be and appear in this honorable court, and then

and there to answer the premises aforesaid, and to stand to, abide, and perform such order and decree therein as this court shall direct; and your orator will ever pray, &c.

C. STEVENS, *Solicitor.*
S. STEVENS, *of Counsel.*

To ERASTUS CORNING, JAMES HORNER, and JOHN F. WINSLOW:

You and each of you are required, separately, to answer the following interrogatories, numbered one, two, three, and four:

fol. 36.) Number one. When did you commence making the hook-headed or brad-headed spike; and what quantity have you made, and what quantity have you sold, and what quantity have you on hand ready for sale?

Number two. What amount of hook-headed or brad-headed spikes have you sold; and to whom have you sold; and where and to what amount to each purchaser?

Number three. Have you not entered into contracts for the manufacture and sale of said spikes; and are you not offering to sell the same to fol. 37) such persons as have occasion to purchase or use said spikes?

Number four. Are not the said spikes made by the use of a machine or machines containing said improvements so secured to said Burden by said patent or patents, and owned by the said complainants?

C. STEVENS, *Complainants' solicitor.*

NORTHERN DISTRICT OF NEW YORK,
Rensselaer county, ss.

Peter A. Burden, of the city of Troy, in the county of Rensselaer aforesaid, being duly sworn, says, that he is the agent of the Troy Iron and Nail Factory, the complainant named in the foregoing bill of complaint, and that as such agent he has the charge, management, and fol. 38) control of the business of the said Troy Iron and Nail Factory, and that from his situation as such agent he has a full knowledge of all the facts stated and set forth in said bill; that he has read the said bill and knows the contents thereof; that the same is true of his own knowledge, except as to the matters therein stated to be on information and belief, and as to these matters he believes it to be true.

PETER A. BURDEN.

Subscribed and sworn to before me, this 8th day of July, 1848.
fol. 39) AMBROSE H. SHELDON,
Clerk of Rensselaer county.

(A.)

The United States of America, to all to whom these letters patent shall come:

Whereas, Henry Burden, who hath resided two years in the United States, hath alleged that he has invented a new and useful improve-

ment in the machinery for manufacturing wrought nails and spikes, which improvement he states has not been known or used before his application; hath sworn that he does verily believe that he is the true inventor or discoverer of the said improvement, and that the same hath fol. 40) not, to the best of his knowledge and belief, been previously used or known in this or any foreign country; hath paid into the treasury of the United States the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the Secretary of State signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Henry Burden, his heirs, administrators, or assigns, for the term of fourteen years from the second day of December, one thousand eight hundred and thirty-four, the fol. 41) full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said improvement; a description whereof is given in the words of the said Henry Burden himself, in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the United States to be hereunto affixed.

[L. S.] Given under my hand at the city of Washington, this second day of December, in the year of our Lord one thousand fol. 42) eight hundred and thirty-four, and of the independence of the United States of America the fifty-ninth.

ANDREW JACKSON.

By the President:

JOHN FORSYTH, *Secretary of State.*

CITY OF WASHINGTON, *to wit:*

I do hereby certify, that the foregoing letters patent were delivered to me on the second day of December, in the year of our Lord one thousand eight hundred and thirty-four, to be examined; that I have examined the same, and find them conformable to law; and I do hereby return the same to the Secretary of State, within fifteen days from fol. 43) the date aforesaid, to wit, on the second day of December, in the year aforesaid.

B. F. BUTLER,
Att'y Gen. of the United States.

(Ex'd: J. J. R.)

The schedule referred to in these letters patent, and making a part of the same, containing a description in the words of the said Henry Burden himself, of his improvements in the machinery for making wrought nails or spikes.

Be it known that I, Henry Burden, of the city of Troy, county of Rensselaer, and State of New York, have made a new and useful improvement in the machinery for heading nails or spikes.

fol. 44) The plans heretofore adopted for heading spikes or nails have

generally consisted of two, one of which was to cut a piece of iron from a rod the length of nail or spike intended, tapering it to a point, and heading it in what is termed a box, by the hammer. When the spikes were of a large size, for the purpose of ship or boat building, particular attention was paid to making the heads perfectly square and uniform in size, which was done by hammering the head on all four the sides alter-
fol. 45) nately, while in the box or heading tool, until brought to the desired shape and size. The other plan was to take hold of the piece of rod by dies, consisting more commonly of two pieces of steel, having half the size of the rod or shank of the nail ground or filed out of each, which, being compressed together like a vice, holds the piece of rod fast while the header, by a cam, presses up the head. It will be observed by this last method, there is nothing to prevent the head from *our* spreading out on all sides, and very frequently the sides of head will be
fol. 46) rough and split, of all shapes and sizes. In order to remedy this difficulty, I use a block of cast iron, about 3 inches square and 12 inches long, having a hole through the centre about 1 inch square for the header to play through. At the end of said cast iron block, next the dies, the hole is made about two inches square, and in length about two inches. This increased size of the hole is for the purpose of inserting a square piece of steel, called a header box, having a hole
fol. 47) through the centre the size and shape of the head intended for the spike or nail. This piece of steel is fastened into the cast iron block by a screw passing through the upper side of said cast iron block bearing against the side of steel box. The reason for the steel box being separate and detached, is to take it out and repair it when it becomes worn by use. It will now be observed that, were a piece of iron or rod gripped fast by the two dies described as above (or two
fol. 48) side steels on the sides, and swedges above and below, as described in my specification in the Patent Office, dated the 26th day of May, 1825,) preparatory to being headed, and the cast iron block pressed forward so as to bring the steel box which is inserted in the end in close contact with the dies, side steels, and swedges, or any other substances or material used for the purpose of gripping or holding the piece of iron or rod while the head is being formed; while in this situation, were the header which passes through the cast iron block and
fol. 49) steel box forced forward by a cam, it would press that part of the iron or rod which projected beyond the dies, &c., &c., intended for the head, so as to fill the steel box, making it the precise shape of the box. As soon as the head is formed, the cast iron block, steel box and header, are all drawn back from the head of the nail by a cam suitable for that purpose, the dies, side steels, and swedges, or whatever is used for the purpose of gripping the nail or spike, opens and lets the nail or spike drop. For a further illustration of this im-
fol. 50) provement, reference must be had to the annexed drawings and descriptions thereof, forming a part of this specification.

Be it also known, that I, Henry Burden aforesaid, have invented a further improvement in the machines for making wrought nails or spikes,

as patented to me on the 26th day of May, 1825, which is described as follows:

What I termed side steels was two pieces of steel, each about three inches wide, one inch thick, and the length of the nail intended, placed parallel to each other, and fastened by means of screw bolts in the mov- fol. 51) ing frame. Between these side steels the rod or piece of iron intended for the nail or spike was confined while it was headed and drawn to a point by the swedges, one of which was fastened to a roller under and the other above. The edges of the swedges, being precisely the same thickness of the nail or spike intended, revolved between the side steels while in the act of rolling out the nail. It is obvious that the side steels must press close and hard on the sides of the swedges, to prevent the iron from escaping between the side steels and swedges, fol. 52) while drawing or rolling the point; which continued pressure and rubbing soon chafed or wore both the side steels and swedges, so as to make their surfaces very rough, which occasioned a great deal of grinding and repairs. It occurred to me that the cause of this great wearing of the surfaces was occasioned by the parts being all of one and the same materials, being all steel, and that by making what I termed side steels of some other hard material, the difficulty might be obviated. I made many experiments with different metals, and found f. 53) that common cast iron chilled on the edges answered a very excellent purpose. The method of casting these side steels is as follows: I make a pattern of wood the size intended for the side steels, then cast a piece or block of iron, having a mortice exactly the size of the edge of the side steel, and about one inch deep. The pattern is then inserted on its edge into the mortice of the cast iron block, the pattern being surrounded by common moulding sand, which after being extracted the iron is poured into the mould one inch in depth, being f. 54) surrounded by cold iron, chills and hardens the edge of the side steels as far up as is wanted, which being ground is ready for use.

What I claim as my invention and improvement is, the method of forming the heads of the nails or spikes in a steel box, as above described. I would remark here, also, that no matter whether the box be made of cast iron or other metal, whether in one or more pieces, whether formed of part of the dies, &c., &c., so long as the chamber f. 55) or hole is so constructed as to admit the header to play tight, and at the same time freely, similar to the piston of a pump or steam engine. When spikes with round heads are wanted, the box and header resemble very much the steam-engine piston and cylinder, without the covers.

Secondly. I claim as my invention the use of cast iron side steels chilled on their edges, as described above, in lieu of their being made of steel, as described in my specification in the Patent Office, dated the 26th day of May, 1825. I would also here remark, that my claim extends to f. 56) what is commonly termed cast iron, no matter how it is

hardened, although I prefer chilling or hardening it in a cast iron block.

Signed, HENRY BURDEN.

Witnesses—P. FORD,
JOHN B. HARRISSON.

B.

THE UNITED STATES OF AMERICA:

To all to whom these letters patent shall come: Whereas, Henry Burden, of Troy, New York, has alleged that he has invented new and useful improvements in the machinery for making hook or brad-headed spikes, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; f. 57) that he does verily believe that he is the original and first inventor or discoverer of the said improvements; and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvements, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Henry f. 58) Burden, his heirs, administrators, or assigns, for the term of fourteen years from the second day of March, one thousand eight hundred and forty, the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said improvements, a description whereof is given in the words of the said Henry Burden, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington, this second day f. 59) of September, in the year of our Lord one thousand eight hundred and forty, and of the independence of the United States of America the sixty-fifth.

J. L. MARTIN,
Acting Secretary of State.

Countersigned and sealed with the seal of the Patent Office.

HENRY L. ELLSWORTH,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.

To all whom it may concern: Be it known, that I, Henry Burden, of the city of Troy, in the county of Rensselaer, in the State of New f. 60) York, have invented certain improvements in the machine for manufacturing wrought iron spikes, by means of which improved ma-

chine they are made with hook or brad heads; and I do hereby declare, that the following is a full and exact description thereof. In my improved machine the feeding in of the rod, the cutting it off, and the pointing the spike, are effected in the way previously used by me for performing the same offices in my ordinary spike machines, or adopted by others; and my improvement for forming the spikes with hook or brad heads may be applied to spike machines of various constructions.

f. 61) Before the introduction of my improvement the heads of hook or brad-headed spikes were, so far as I am informed, always made by hand, and they were necessarily imperfect, being deficient in that uniformity of shape and strength which are important requisites. My improvement in manufacturing them consists principally in the employment of what I denominate a bending lever, or some analogous device, by means of which the portion of the rod which is to constitute the head is bent down, so as to form an angle with the shank, and in f. 61) then forcing up a heading die, properly formed, so as to upset the bent portion, and to cause it to assume the desired shape.

In the accompanying drawings, fig. 1, is a top view of the machine, and figs. 2 and 3 are sectional side views, or elevations from end to end, along a line extending from A to B in fig. 1; in each of these figures, when like parts are shown, they are designated by the same letters of reference. AA is the bed plate, upon which most of the operating parts of the machine are sustained; BB are the dies which grip and f. 63) hold the spike rod during the time the bending and heading are effected; C is a lever by which the die B is closed, the die B being stationary. This lever is acted upon by the segmental cam D, on the driving shaft E of the machine; the frame FF, which holds the die B, works on a joint rod, CC, and is lifted up by the strap dd, attached by the joint pin, e, to the lever c. The spike rod, f, is to be fed into the dies f. 64) in the usual way, and as soon as the dies are closed upon the piece to be headed, the bending lever, G, has its outer end, h, raised by the cam H on the shaft E, which causes its end, g, to descend upon the projecting end of the spike rod, and to bend it down in the manner shown in fig. 2; I is the heading slide which carries the heading die, J, and as soon as the cam H escapes from the outer end of the bending lever, h, and that end descends, the cam K comes into contact with the end L, of the heading slide, which it forces forward, and the f. 65) head of the spike is completed, as represented in fig. 4; M is a spring which serves to draw the heading slide back when it is released from the action of the cam K. The exact form of the head will necessarily be determined by that of the heading die, and by the cavity in the gripping dies, within which the metal is upset by the heading die, and may be varied at pleasure.

Having thus fully described the manner in which I in general construct my machine for the making of hook or brad-headed spikes, and having given that form thereof which, after numerous experiments, I f. 66) have deemed to be the best, I will observe, that it will be mani-

fest to every competent machinist that considerable variation may be made in the manner of arranging and operating the respective parts, whilst it would remain substantially the same in all its essential characteristics; and I do not intend, therefore, by the foregoing description, to confine or to limit myself to the precise form or arrangement of the parts herein shown, but hold myself at liberty to vary them as I may think proper, whilst I attain the same end by analogous means.

What I claim, therefore, in the above described machine as constitut-
f. 67) ing my invention, and which I desire to secure by letters patent, is the bending of that portion of the end of the spike rod from which a hook or brad-headed spike is to be formed by means of what I have denominated the bending lever, or by some analogous device, operating substantially in the manner and for the purposes herein set forth; and in combination therewith I also claim the so forming of the heading die, and of the parts of the gripping dies within which the bent
f. 68) part is to be upset, as to give the proper shape to the hook or brad head to be thus formed.

In testimony whereof I hereunto set my hand, this eighteenth day of August, 1840.

H. BURDEN.

Witnesses—THOS. P. JONES,
GEORGE WEST.

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

f. 69) In equity.

The joint and several answers of Erastus Corning, James Horner, and John F. Winslow, to the bill of complaint of the Troy Iron and Nail Factory, as a corporation, complainant against said defendants.

These defendants, now and at all times saving and reserving to themselves all advantages and benefit of exception to the errors and imperfections contained in the said bill of complaint of the complainant, for answer thereto, or to so much thereof as they are advised it is
f. 70) material for them to make answer unto, they answering:

Admit that on the 20th day of July, in the year 1835, the complainant was duly created a body politic and corporate, under and by virtue of, and pursuant to, the act of the legislature of the State of New
38 York, entitled "An act relative to incorporations for manufacturing purposes," passed March 22d, 1811, and the acts continuing and amending the same, for the purpose of conducting and carrying on the business of manufacturing nail rods, hoop iron, cut nails, and spikes, and forming and making all kinds of machinery, tools, and im-
f. 71) plements, and wares, made, used, or improved in and about manufactories established for such purposes at the city of Troy, and county of Rensselaer, and State of New York, under the corporate name of "The Troy Iron and Nail Factory."

And these defendants further answering admit, that, previous to the 2d day of December, in the year 1834, one Henry Burden, then and still of said city of Troy, became and was the inventor and discoverer of new and useful improvements in the machinery for manufactur- 39
f. 72) ing wrought nails or spikes, and being a citizen of the United States, made application in due form of law to the Patent Office of the United States for letters patent for his said invention, in the manner prescribed by and according to the provisions of the acts of Congress in such case made and provided; and complied with all the provisions of the acts of Congress in relation to such application; and that, on or about the 2d day of December, in the year 1834, letters patent were granted to the said Henry Burden for his said improvement, bearing date on the 2d day of December, 1834, and are the same as are in the
f. 73) complainant's bill of complaint, and the schedule marked A, thereto annexed, particularly set forth.

And these defendants further answering admit, that on or about the second day of December, in the year 1836, the said Henry Burden, for a valuable consideration, did, in and by a certain instrument in writing of that date, made and executed as well by the said Burden 40
as the said complainant, and which in said bill of complaint is referred
f. 74) to, and of which a copy is hereunto annexed, marked A, and making a part of this answer, grant, bargain, sell, assign, and transfer unto the complainant the said letters patent, so as aforesaid granted to him, together with all the rights and privileges secured thereby.

But these defendants deny that, in and by the said instrument in writing, or any other instrument or agreement in writing, recorded in the Patent Office at Washington, or in or by any other instrument or agreement of which these defendants have any knowledge, it was covenanted and agreed by said Burden, to and with the complainant, that if he, the said Henry Burden, should thereafter make any improve-
f. 75) ment in or upon his said invention, for which he had obtained his said letters patent above mentioned, that he would grant and convey the same to the said complainant; and they insist that if any such agreement was in form made, it is inoperative and void as against these defendants, inasmuch as the effect thereof was merely a contingent 41
possibility, and the defendants could not in any way be affected thereby.

And these defendants further answering admit, that in and by the
f. 76) specification annexed to and forming a part of the said letters patent, so granted to the said Henry Burden as aforesaid, the said improvement, so invented and discovered by the said Henry Burden, and for which the said letters patent were so granted as aforesaid, is fully described and set forth in such full, clear and exact terms as to distinguish it from all other improvements before known or used. But these defendants deny that the improvement for which said letters patent were so granted as aforesaid is of great value, or is still used by the complainant in the prosecution of the business of the said complainant; on the contrary, these defendants aver, that the said improve-

ment, although once used by said complainant and others, is now and
f. 77) for a long time since has been superseded by other machines, 42
and has ceased to be used by the complainant or others, or to be of any
use or value.

And these defendants further answering admit, that, according to the provisions of the acts of Congress, said Burden made application to the Patent Office of the United States for a patent for certain improvements in the machinery for making hook or brad-headed spikes, which he claimed to be new and useful, and of which he claimed to be the in-
f. 78) ventor or discoverer; but at what time said Burden made said application these defendants do not know, and have no means of forming a belief, and leave complainant to proof thereof; and that upon said application, and on the 2d day of September, 1840, letters patent for said last mentioned improvements were granted to said Henry Burden, under the seal of the Patent Office of the United States, of which letters patent a copy is annexed to the complainants' bill of complaint herein, marked schedule B. But these defendants expressly deny that said 43
f. 79) improvements were, at the time of said application or the issuing of said letters patent, new; or that said Henry Burden is, or ever was, the inventor or discoverer of the same; on the contrary, these defendants expressly state, on their information and belief, that in the year 1835, in the city of Troy aforesaid, two persons, by the name of Thomas Osgood and William Osgood, performed the bending of that portion of the end of the spike rod from which a hook or brad-headed spike is to be formed, by means of a bending lever; and said Thomas
f. 80) and William then made and constructed a bending lever, to be used in making hook or brad-headed spikes, for the purpose of bending that portion of the end of the spike rod from which a hook or brad-headed spike is to be formed; which bending lever was and is the same in principle, aad without any substantial difference of form, and was operated in substantially the same manner, for the same purpose, and with the same result, as the bending lever mentioned in the complainants' bill of complaint, and the schedules and diagrams thereto
f. 81) annexed, and the same bending lever was then and there 44
publicly, openly, and practically put into use for the purpose aforesaid.

That the said Thomas and William also at that time combined with said bending lever, so constructed by them, the so forming of the heading die, and of the parts of the gripping dies within which the bent part is to be upset, as to give the proper shape to the hook or brad head to be thus formed; which said bending lever and combination are substantially the same devices, without substantial difference of form or
f. 82) combination, constructed for the same purposes, operated substantially in the said manner, and produces substantially the same results with the bending lever and combination described and claimed in said letters patent so granted to said Henry Burden on the 2d day of September, 1840, as set forth in said bill and schedules. That said bending lever, and in combination therewith said heading die, and said parts of the gripping dies, so constructed by said Osgoods, were by

said Osgoods, then in the employ of these defendants at the time and f. 83) place last aforesaid, attached to and used in making spikes, as a part of a spike machine, and of machines then in the possession 45 and use of the defendants at Troy aforesaid.

That in each of the years 1835, 1836, 1837, and 1838, the hook-headed or brad-headed spike was made by means of said bending lever, and said combination thereof with said dies, as constructed and combined by said Osgoods as aforesaid, and in connexion with said spike machine in defendant's factory at Troy aforesaid, for sale and f. 84) as samples of manufacture. That in the year 1838 a contract was made by the defendants to manufacture and sell to the Little Schuylkill and Susquehanna railroad a large quantity, amounting to several tons, of said hook-headed or brad-headed spikes, for use upon said railroad. That in the month of February, 1839, the said defendants, at their factory in Troy aforesaid, commenced manufacturing said hook-headed or brad-headed spikes last aforesaid, 46 f. 85) with their spike machines, and used in connexion with their said machines, and as part thereof, the said bending lever and said heading dies, and gripping dies, so formed and combined by said Osgoods as aforesaid; and therewith in said year last aforesaid, and previous to the 18th day of April, 1839, manufactured at Troy, and delivered at Philadelphia, for the use of said railroad upon said contract, several tons of said hook or brad-headed spikes, with the knowledge of said Henry Burden, and of the agent of the said complainant, who saw said bending lever and dies, and said combination thereof, so in use by f. 86) said defendants, in the process of manufacturing said spikes; and that said defendants so continued to use in the manufacture of said hook or brad-headed spike said bending lever and dies, so formed and combined by said Osgoods during the year 1839, and until they fulfilled said contract; and thereafter frequently have used the same in manufacturing said hook or brad-headed spike for sale.

And these defendants further answering say, that, as they are 47 informed and believe, in the latter part of the year 1839, or in the fore f. 87) part of the year 1840, (the exact time they cannot more particularly state,) and before the time of the pretended discovery and invention by the said Burden of his pretended new and useful improvements, for which he obtained the said patent set forth in the said schedule B, to the complainants' said bill of complaint annexed, one Ebenezer Hunt, at the said city of Troy, and while in the employ of said Burden, and with his knowledge, invented and discovered, and caused to be made a bending lever, substantially the same in form, f. 88) and operating in substantially the same manner, and used for the same purpose, and with the same results, as the said bending lever described in the said bill of complaint of the complainant. That, at the time and place aforesaid, the said bending lever of said Hunt was attached to a spike machine, and was for a long time thereafter openly and publicly used at the said city of Troy in manufacturing spikes for sale, with the knowledge of said Burden, before the said Burden

had obtained his patent mentioned in schedule B, annexed to said 48
bill of complaint, or had made or constructed the said bending lever therein described, or secured any right to himself to a patent therefor;
f. 89) and that the said bending lever, so invented and constructed by the said Hunt, was so used as aforesaid in the manufacture of spikes, for the purpose of bending that portion of the end of the spike rod from which a hook or brad headed spike is to be formed; and said bending lever was by said Hunt combined in said use with a die, and with those parts of the gripping dies within which the bent part of the hook or brad head is to be upset, so formed as to give the proper shape to the hook or brad head to be thus formed; which said bending lever
f. 90) and combination are substantially the same devices, or without substantial difference of form or combination, constructed for the same purpose, operated substantially in the same manner, and produces substantially the same results with the bending lever and combination described and claimed in said letters patent so granted to said Henry Burden, on the 2d day of September, 1840, as set forth in said bill and schedules.

f. 91) And these defendants further answering say, upon their in- 49
formation and belief, that besides the bending lever herein before set forth, as made and constructed by said William Osgood and Thomas Osgood, and said Ebenezer Hunt, and used in the manner and for the purposes aforesaid, other bending levers operating upon the same principle as that described in the complainants' bill of complaint, and said schedule B thereto annexed, and of similar construction, and similarly combined with said dies, and parts of dies, and used for the same purpose of manufacturing spikes, and operated substantially in the same manner, and producing the same results, were made and constructed,
f. 92) and openly and publicly used by several persons other than said Hunt and Osgoods, to wit, by one Joshua Butterworth, at Morris county, New Jersey, in the year 1837; and by one Richard Savary, at Fair Haven, Bristol county, Massachusetts, in the years 1838 and 1839; and by other persons at other times and places in the United States, for the manufacturing of spike for sale before said Burden invented, made, or constructed a bending lever of the description as set forth in said schedule B, annexed to said bill of complaint, or any thing similar thereto, and before he invented or made any combination 50
f. 93) thereof with said dies, as is described in said letters patent and the schedules thereto annexed, being dated September 2d, 1840, and that said Burden wrongfully obtained his said patent, with full knowledge of said previous inventions and use.

And these defendants further answering deny, that, under and by virtue of the agreement made between the complainant and the said Henry Burden, bearing date the 2d day of December, in the year 1836, mentioned in said bill of complaint, and set forth in this answer,
f. 94) the complainant became entitled, either legally or equitably, to the said alleged improvements for which the said last mentioned patent was so obtained by, and granted to, the said Henry Burden, and

to the rights and privileges secured thereby, or to any part thereof; and they insist that the device and combination, or thing claimed by said complainant, under and by virtue of the said patent of September 2d, 1840, granted to said Burden, was and is a distinct, separate, and independent invention or thing not in anywise connected with, nor an
f. 95) improvement of the said machine alleged in said bill of com- 51
plaint to have been patented by said Burden in the year 1834; and that the said device, combination, or thing, was never used upon or in connexion with said machine or improvement patented by said Burden by his letters patent of the date of December 2d, 1834, and mentioned in said bill.

And these defendants admit, that, on the 19th day of June, 1848, the said Henry Burden executed and delivered to the complainant an instrument in writing, in the words and figures following, to wit:
f. 96) "Whereas, Henry Burden, on the second day of December, in the year 1836, by an instrument in writing duly executed by him, for a valuable consideration, did sell, assign, and convey all his right and title in and to certain letters patent obtained by him; one bearing date the 26th day of May, 1825, for a new and useful improvement in the manufacture of wrought nails or spikes solely by the aid of machinery; and the other bearing date the 2d day of December, 1834, for a new and useful improvement in the machinery for the manufac-
f. 97) ture of wrought nails or spikes, to the Troy Iron and Nail 52
Factory, and did in and by said instrument in writing covenant and agree, to and with the said Troy Iron and Nail Factory, to transfer and assign to the said factory any improvement he should thereafter discover or invent in the machinery for making wrought nails or spikes; which said instrument in writing was duly recorded in the Patent Office at the city of Washington on the 13th day of August, 1839, as by reference thereto will more fully appear.
f. 98) And whereas, the said Henry Burden did, on the 2d day of September, 1840, duly obtain letters patent for new and useful improvements in the machinery for making hook or brad headed spikes, which, by the terms of the said instrument in writing hereinbefore mentioned, belong to the Troy Iron and Nail Factory. Now, therefore, I, the said Henry Burden, in consideration of the premises, do sell, assign, transfer, and set over to the said Troy Iron and Nail Factory all my right, title, and interest of, in, and to the letters patent so obtained
f. 99) by me on the 2d day of September, 1840, as above men- 53
tioned, together with all and singular the rights and privileges granted and secured thereby.

In witness whereof I have hereunto set my hand and seal this 19th day of June, 1848.

H. BURDEN. [L. S.]

Sealed and delivered in presence of—
THEODORE FONDA.

And these defendants deny that the said Henry Burden ever exe-

cuted or delivered to the complainant any other or different instruments of assignment of said patented improvements described in said patent
f. 100) of September 2d, 1840. And they deny that the said instrument of the 19th day of June, 1848, was made in pursuance of the said agreement of December 2d, 1836, as herein before mentioned, or of any covenant therein contained, or by virtue thereof, or that any such assignment as is made by the instrument of the 19th day of June, 1848, was provided for or contemplated in and by the said agreement of December 2d, 1836. 54

And these defendants deny that any relation or connexion exists between the said instruments of the 19th day of June, 1848, and said agreement of December 2d, 1836, and they insist that said instrument
f. 101) of the 19th day of June, 1848, was executed by said Burden voluntarily and without consideration, and that the recital contained in said instrument, dated the 19th day of June, 1848, of a covenant to assign, is fraudulent and false.

And these defendants insist that the assignment, so executed and
f. 102) delivered by said Burden, bearing date the 19th day of June, 1848, and all the rights, interests, and privileges held or claimed thereunder by the complainant are subject to. and do not in any way affect or impair the right, title, interest, and license of these defendants, for a good and valuable consideration granted to them by said Burden, by an instrument in writing, executed and delivered by him to these defendants on the 14th day of October, 1845, of which a copy is hereunto annexed, marked schedule B, and forming a part of this
f. 103) answer, and which these defendants have ever since held, and still hold, and are ready and willing to produce and prove when and where this court shall direct, and to which for greater certainty these 55 defendants refer.

And these defendants deny that, in and by any bargain, sale, assignment, or transfer from or by the said Burden, the complainants were, at the time of filing their said bill of complaint, or now are, the sole and exclusive owners of said last mentioned patent, and of all the rights and privileges granted and secured thereby. And they aver and insist that
f. 104) on the 14th day of October, 1845, for the purpose of a full settlement and compromise of differences and claims then existing between the said Burden and defendants, and the complainant and defendants, arising out of counter claims of said parties to a patent right of the machine for making the patent horse shoes mentioned in said schedule B, and also to a patent right for the making of spike mentioned therein, and also out of the right claimed by each of said parties as his own, to manufacture and vend said horse shoes, and the said hook or brad-headed spike, without the assent or permission of any other of said
f. 105) parties or any one else, and to use in said manufacture said bending lever and combination therewith as aforesaid, the said Henry 56 Burden then being the owner of the patent last mentioned in said bill of complaint, or the agent of the complainants as owners thereof, and acting accordingly, and with the knowledge, consent, and approval of the

complainant, in consideration that the said defendants, by said Erastus Corning, acting in their behalf, had agreed to pay to the complainants the sum of fifteen hundred dollars for the one undivided half part of certain premises in the vicinity of the manufacturing establishments of
f. 106) both complainant and defendants, which the complainant then held and owned, known as their wharf property in the town of Greenbush, in the county of Rensselaer, near the southerly bounds of the city of Troy, bounded on the east by the Troy and Greenbush railroad, on the west by the Hudson river, on the north by the northerly line of the old dock or wharf of said complainant, and extending thence southerly along Hudson's river one thousand feet, with the wharves thereon, and all the rights and appurtenances thereto belonging, in behalf of the said complainant, did agree, to and with said
f. 107) Erastus Corning, who acted therein for and in behalf of said defendants, by an instrument in writing executed by said Henry 57 Burden, as the agent of said complainant, (and of which, according to these defendants' best knowledge and belief, a counterpart was executed by or in behalf of these defendants, and delivered to said Burden,) that the said complainant would sell to the said Erastus Corning (who acted therein for and in behalf of these defendants) by release and conveyance, with covenants against the acts of said complainant, the aforesaid premises, as by said instrument in writing hereunto annexed, and making a part of this answer, and marked C, now in pos-
f. 108) session of these defendants, and ready to be produced as this court shall direct, will more fully and at large appear; and at the same time and place when and where the said last mentioned instrument was so as aforesaid executed, and as a part of the same agreement and understanding, settlement, and compromise by and between these defendants and said Burden and said complainant, then and there made and had, the said Burden did also then, being the owner of said last mentioned patent, or acting for the complainant as owner of the
f. 109) same, and with authority thereto to him given by said complainant, execute and deliver to these defendants said instrument in 58 writing herein before mentioned and hereto marked B, a counterpart of which was also executed and delivered by these defendants to said Burden as they verily believe, and by virtue of which instrument the suit in equity hereinafter mentioned, and which was then pending, and is the same suit in said instrument mentioned, was by mutual agreement between the parties on the record in said suit discontinued and settled, and the right, privilege, and license were given by each
f. 110) of said parties to the other to manufacture and vend the spikes of the same description as those which were and had theretofore been manufactured by said machine and alleged improvement patented in and by the said patent of the date of September 2d, 1840, and any spike of any description which the said parties might respectively choose to manufacture, and for the purpose of manufacturing the same, the right and license to use all and any of the said machinery so as aforesaid claimed by the complainant in said bill to have been

by said Burden patented by said patent in said bill of complaint se-
f. 111) condly mentioned, and by which said instrument, marked
exhibit B, it was also agreed by said defendants, as part of the 59
consideration for said license granted to them, that said Burden might
manufacture a certain patent horse shoe, the exclusive right by patent
to manufacture which, the defendant Winslow claimed and then held
by patent, for the benefit of all of said defendants, and that said defend-
ants would not manufacture the same.

And these defendants further answering say, that in pursuance of
said two instruments in writing, and the agreements therein contained,
the complainants did convey to the said Erastus Corning, in whose
name said purchase was made by these defendants, the said land and
f. 112) premises in said paper marked schedule C mentioned; the said
defendants did pay to the complainant therefor the sum of fifteen hun-
dred dollars, and took and entered into the possession of said premises,
which they still retain, and the said suit mentioned in said paper
marked exhibit B was discontinued and settled; and these defendants
have never demanded any costs of the complainant or said Burden
therein; nor has the complainant or said Burden demanded any costs
therein of the defendants. That these defendants have, also, since 60
the said 14th day of October, 1845, wholly ceased to manufacture said
f. 113) patent horse shoes, which before they used to manufacture and
make large profits thereof, and have never resumed the same; and
both the said Burden and said complainant have been permitted to
manufacture, and have manufactured, the same at his or their pleasure,
and made large profits thereby; and these defendants, since said 14th
day of October, 1845, until the time of filing said bill, and without
any prohibition or complaint by said Burden or said complainant,
have, on their part and behalf, manufactured by and with said ma-
f. 114) chines, containing the said improvements patented by said Bur-
den, by said patent bearing date the 2d day of September, 1840, the
said hook or brad-headed spike in large quantities, and vended the
same with the knowledge of said complainant and said Burden, and
without any objection thereto on the part of either said Burden or said
complainant, down to the time of filing said bill of complaint in this
cause, as these defendants were fully authorized to do, and which 61
said manufacturing and vending thereof by these defendants are
charged in and by the complainants' said bill of complaint to be
f. 115) violations of said last mentioned patent, so as aforesaid granted
to said Burden.

And these defendants further answering say, that they do not know,
and have no means of forming a belief, and therefore cannot either
admit or deny, that the complainant expended large sums of money,
or any sums whatever, in making the machinery containing the im-
provements mentioned and described in the said last mentioned patent;
and in bringing said improvements into use and successful operation,
nor whether from the use of the said improvements the complainant was
f. 116) receiving large profits and gains by the manufacture of hook or

brad-headed spikes, with the aid of the improvements in the machinery for the manufacture thereof, and for which the patent in the said bill mentioned of the date of September 2d, 1840, was granted to said 62 Burden, nor whether the complainants would have continued to realize and receive any gains therefrom, but for the pretended violation of said patent complained of by said complainant; and they leave the complainant to proof thereof as said complainants shall be advised.

And these defendants further answering admit, that on or about the f. 117) 15th day of October, 1845, the defendants as copartners and carrying on the iron and nail business at the said city of Troy, where their works now are, and then were, and for many years before had been, and were situated on the same stream of water with the complainant's factory, and at a distance of about seventy rods therefrom, formerly known as the Albany iron and nail works, and since the first day of April, 1838, as the Albany iron works, and in which for many f. 118) years before said 15th day of October, 1845, they had manufactured for sale large quantities of spikes and nails, did erect and put in use four or five machines for the manufacture of hook or brad- 63 headed spikes, which said machines had combined with each of them, and used with them, a bending lever of the form, principle, and construction of the bending lever herein before in this answer described and claimed to have been invented and used as aforesaid, by said William Osgood and Thomas Osgood, and by said Ebenezer Hunt, and f. 119) which these defendants admit to be of the same principles in operation as the said bending lever so claimed by said Burden to have been invented by him, and for which letters patent were as aforesaid granted to him; and that the defendants have, since the 15th day of October, 1845, been engaged, and are still engaged, in manufacturing said hook or brad-headed spikes, whenever these defendants had or have a demand for the same; and that in such manufacture they have used and still use said improvements claimed by said complainant in f. 120) the said bill of complaint to be new and useful, and to be secured by the patent so as aforesaid granted to said Burden on the 2d day of September, 1840, and have thereby made large profits, but 64 not to the amount of one hundred thousand dollars, as is charged in said bill of complaint.

But these defendants deny that said complainant has ever become the sole and exclusive owner of said patent, so granted to said Burden as last aforesaid. And they deny that the use as aforesaid by them, of said four or five machines with said improvements, was or is in viola- f. 121) tion of any rights or privileges of the complainant granted by said letters patent or otherwise.

And these defendants further answering deny, that the complainant at any time since the 14th day of October, 1845, and the erection and use of said four or five machines, charged in said bill of complaint to be a violation of the rights of said complainants under said patent, bearing date the 2d day of September, 1840, requested the defendants to desist and refrain from any violations of the complainants' rights, or

f. 122) to cease using said machines, or to account for any profits or damages; on the contrary, both said complainant and said Burden, 65 have since the said 14th day of October, 1845, repeatedly admitted and stated to said defendants, or some of them, and as these defendants are informed and believe, to other persons, that by virtue of said compromise, agreement, and license of the 14th day of October, 1845, the said defendants had full power, authority, and license to use said machines and said improvements, so as aforesaid claimed to have been patented by said Burden, by the said letters patent, dated Sep-
f. 123) tember 2d, 1840, and to make therewith said hook or brad-headed spike, which these defendants aver was in fact true.

And these defendants admit, that they did and still do pretend and claim, that said Henry Burden was not the first inventor or discoverer of said alleged improvements for which the last aforesaid patent was obtained, and that the use of said alleged improvements by the defendants was not an infringement upon or violation of any right granted or secured by said patent; and they aver such to have been and to be the fact. 66

f. 124) These defendants also admit, that a suit at law in this court was, in the year 1842, commenced by said Henry Burden against the defendants, for the alleged cause as in said bill of complaint is stated, and was resisted by the defendants upon the ground stated in said bill. That said suit was tried at the October term of this court in the year 1842, and resulted as in said bill of complaint stated. That said defendants made a bill of exceptions in said cause, upon which a motion f. 125) for a new trial in said cause was argued, and denied with costs at the June term of this court, 1843, and that judgment in favor of said Burden was accordingly perfected in said cause.

But these defendants, on their information and belief, allege that said suit was so commenced and prosecuted for the benefit of said pretended corporation, as well as of said Burden, and by the consent of the then president of said pretended corporation. 67

And these defendants expressly deny, that in and by said proceed-
f. 126) ings, and said judgment at law, the originality of the said alleged invention, or the validity of said patent, so claimed by the complainant, was or is established. On the contrary, these defendants aver, that subsequently to said judgment, and in the year 1844, the said Burden filed his bill in equity in this court against these defendants, charging that, since the rendition of said judgment, these defendants had resumed the manufacture of said hook or brad-headed spikes, by
f. 127) the use of his aforesaid alleged improvements, and in violation of the rights of said Burden, secured by said patent bearing date September 2d, 1840, and proceedings were had in said suit to restrain these defendants from making said hook or brad-headed spikes, and using said machinery, and to that end an injunction was granted by this court, by reason of a default of these defendants, which resulted from a casualty; and thereafter, and on the 14th day of October, 1845, and during the pendency of said suit in equity, and the proceed-

ings therein, (which bill in equity these defendants, upon their 68 information and belief, allege was filed and prosecuted as well for f. 128) the benefit of said pretended corporation, as of said Burden, and with the consent of the then president thereof,) the said compromise, agreement and license of October 14th, 1845, was made as aforesaid, and the same was and is, and was so understood and intended by all the parties thereto, and interested therein, as aforesaid, to be a relinquishment and surrender to the defendants, of and by which they were permitted, licensed, and authorized, for a valuable consideration, to use the machine or invention patented September 2d, 1840, and also to use at any time thereafter any and every machine, invention, or thing, whether claimed by said Burden or by these defendants, f. 129) in and about the making of said hook or brad-headed spike; and by which for a valuable consideration said suit then pending was settled, and all benefits and advantages arising, or which might be claimed for said Burden and said complainant thereout, or from or out of the judgment and proceedings at law upon which said suit was 69 founded and did depend, was entirely waived and relinquished as against these defendants.

And these defendants further answering deny, that the said com- fol. 130) plainant is now, or was at time of filing said bill of complaint, a body politic and corporate under and by virtue of any law of the State of New York; and they insist, and upon their information and belief state and aver, that the said pretended corporation had before the filing of said bill ceased to exist, for the want of the required number of stockholders, and by failure to elect its trustees as prescribed by law, and by other violations of the law, and had forfeited its corporate rights, among other illegal acts by it done, by trading for several years last past in merchandise promiscuously—and that in fact, at the time of filing said fol. 131) bill, said Henry Burden was the sole corporator, and for 70 many years before had been the sole acting, and in fact or ostensibly, manager or agent of said pretended corporation; and that Peter A. Burden, Andrew White, and Philip T. Heartt, who, at or about the fol. 132) commencement of this suit, assumed to be or were by said Burden claimed to be, the remainder of the stockholders and trustees of said pretended corporation, were only nominally such, and were so made fraudulently by or for the accommodation of said Henry Burden, who then alone in fact and in interest constituted and was said pretended body corporate.

And these defendants say that the said instrument of the date of the fol. 134) 19th of June, 1848, being made by the said Henry Burden to the said pretended corporation, was and is a fraudulent device to overreach and defeat the said compromise, agreement, and license of the 14th day of October, 1845, and is utterly fraudulent and void as against these defendants. And these defendants pray the same advantage of their aforesaid answer, as if they had pleaded or demurred to the 71 complainants' said bill of complaint.

And to the first specific interrogatory annexed to said bill they an-

swering say, that they admit that they commenced and were engaged in making the said hook-headed or brad-headed spike, on the said 15th day of October, 1845, and have continued at intervals to make them, since the day and year last aforesaid, to the 8th day of July, 1848, the f. 135) time of the verification of the complainants' said bill of complaint.

That since the 15th day of October, 1845, they have made of said hook, or brad-headed spike, 1,523¼ tons, as will more particularly appear in schedule D, hereto annexed, and have sold the same as in said schedule stated, and that they have none of said spike on hand ready for sale.

To the second of said interrogatories the defendants answering say, that from said 15th day of October, 1845, to the said 8th day of July, 1848, inclusive, they sold of said hook or brad-headed spike so made f. 136) by them the amount of $137,121 24, and that they sold the same to the purchasers at the places and in the amounts annexed to their names respectively, as particularly stated in the schedule hereunto annexed, marked D, and forming a part of this answer. 72

To the third of said interrogatories the said defendants answering say, that they have entered into contracts for the manufacture and sale of said spikes, and they are offering to sell the same to such persons as f. 137) have occasion to purchase or use said spikes.

To the fourth of said interrogatories these defendants answering say, that said spikes are made by the use of a machine or machines containing the alleged improvements claimed in said bill of complaint to have been secured to said Burden by the aforesaid patents, so as aforesaid granted to him, and claimed to be owned by the complainant.

All which matters and things these defendants are ready to aver, maintain, and prove, as this honorable court shall direct. 73

And they deny that any other matter or thing in said bill contained, f. 138) not herein and hereby sufficiently answered, avoided, or denied, is true to their knowledge or belief: and they pray to be hence dismissed with their reasonable costs and charges in this behalf most wrongfully sustained.

ERASTUS CORNING,
JOHN F. WINSLOW,
JAMES HORNER,
D. L. SEYMOUR, *Solicitor.*
W. H. SEWARD, *of Counsel.*

STATE OF NEW YORK, *Albany county, ss.*

On this 1st day of March, 1849, John F. Winslow, one of the above named defendants, personally appeared before me, and made oath that he had heard the above answer, by them subscribed, read, and knows f. 139) the contents thereof, and that the same is true of his own knowledge, except as to the matters which are therein stated to be on their 74 information or belief, and as to those matters he believes it to be true.

WM. PARMALEE,
Albany county judge.

Schedule A, referred to in the annexed answer.

Articles of agreement made this second day of December, in the year one thousand eight hundred and thirty-six, between Henry Burden, of the city of Troy, of the first part, and the Troy Iron and Nail Factory of the second part. Whereas the said Henry Burden has, pursuant to
f. 140) the laws, and by the authority of the laws of the United States of America, heretofore obtained sundry patents for new and useful inventions and improvements in machinery, as follows, to wit: A patent, bearing date the twenty-sixth day of May, in the year one thousand eight hundred and twenty-five, for a new and useful improvement in the manufacturing of wrought nails or spikes, solely by the aid of machinery. Also one other patent, bearing date the second day of December, in the year one thousand eight hundred and thirty-four, for a new and useful improvement in the machinery for manufacturing 75
wrought nails or spikes. Also one other patent, bearing date the twen-
f. 141) ty-third day of November, in the year one thousand eight hundred and thirty-five, for a new and useful improvement in the machinery for making horse shoes. And whereas a number of machines for the manufacture of wrought nails and spikes, after the method invented and patented by the said Henry Burden, have, in pursuance of an agreement heretofore made between the parties to these presents, been constructed and used, and are still in use upon the premises of the par-
f. 142) ties of the second part, in the sixth ward of the city of Troy, and machines for making horse-shoes, after the method invented and patented by the said Henry, have also been constructed and are now in use upon the premises aforesaid. And whereas it has been found inconvenient to keep separate accounts in relation to the articles manufactured by the machines patented by the said Henry Burden, and the parties deem it to be for their mutual interest that the several branches of manufacturing carried on by the said parties of the second part, 76
at the place aforesaid, should be managed as one individual concern, and the accounts be thereby simplified: they therefore have agreed, and do hereby mutually covenant and agree, to with each other, as
f. 143) follows, to wit: The said Henry Burden, party of the first part, doth hereby grant, bargain, sell, assign and transfer, to the said parties of the second part, the several patents above specified, for the manufacture of wrought nails or spikes by machinery, and for a new and useful improvement in the machinery for manufacturing wrought nails or spikes, and the sole and exclusive right to use the machines for manufacturing wrought nails or spikes, now on the premises of the said parties of the second part, and also the exclusive right to construct and use such other machines for manufacturing wrough nails or spikes, after
f. 144) the method invented by the said party of the first part, with all the improvements which he hath made or shall make in the same, in any other part of the Uuited States, as the said parties of the second part shall deem expedient during the terms for which the same are or may be patented by the said party of the first part. And the said Hen-

ry Burden doth also hereby license and permit the said parties of the second part to use on their premises, in the city of Troy, the machines
f. 145) for making horse shoes, now on the said premises, and doth 77
also license and permit them to construct and use upon the said premises, and not elsewhere, so many machines for making horse shoes, in the method invented by the said Henry, as the said parties of the second part shall deem expedient, with the right and privilege of using on said premises all improvements made or to be made by the said Henry in the machines or machinery for making horse shoes, this license to be in force during such time as the patent or patents obtained by the said Henry shall be in force. And the said Henry doth also covenant and agree, to and with the said parties of the second part, that
f. 146) if he shall discover or invent any useful improvement in the machinery already patented to him for making and manufacturing wrought nails or spikes, or for making horse shoes, he will make application for a patent or patents therefor, and endeavour to obtain the same; and whenever any improvements shall be made in the machinery for manufacturing wrought nails or spikes, or for making horse shoes, the license hereby granted to the party of the second part shall be deemed to extend to all such improvements. And the said Henry doth further agree and covenant with the said parties of the second part, that he will not grant, bargain, sell or assign his said patents for the
f. 147) manufacture of horse shoes by machinery, for any district or locality, nor license or permit the erection or use of any such machine for the manufacture of horse shoes, in any part of the United States, to any person or persons whomsoever, until and unless the said parties of the second part shall have previously refused to construct and use so many additional machines for the manufacture of horse shoes as it shall appear can be profitably and beneficially employed in such man-
f. 148) ufacture. And in consideration of the grants, covenants, and agreements, licenses and permissions aforesaid, of the said Henry, the said parties of the second part do hereby covenant and agree, to and with the said Henry, his executors, administrators and assigns, that out of all sum or sums of money set apart, and out of which a dividend or dividends shall, at any time or times during the period for which the said letters patent shall respectively be in force, *shall* be declared, and which shall at all times consist of net profits, they will pay to the said Henry
f. 149) thirty per cent. thereof, that is to say, thirty dollars out of every hundred dollars; and which sum or sums thus set apart for dividends shall be net profits of the entire business and manufacturing opera- 79
tions of the said parties of the second part, in all the branches carried on or to be carried on by them from time to time, for and during the respective times for which the respective patents aforesaid, or any improvements in them, or any or either of them respectively, shall be in force; the remaining seventy per cent., or seventy dollars of every one hundred dollars, to be divided among the stockholders in the said Troy Iron and Nail Factory. The party of the first part to be entitled
f. 150) at the time of the determination of this agreement to thirty per

cent. of the value of all the machinery for manufacturing wrought nails, or spikes and horse shoes, which shall then be on hand. And the party of the first part shall also be deemed interested in all real estate to be purchased out of the earnings, and in the said additions f. 151) and improvements in the like proportion, that is to say, of thirty parts in every one hundred undivided parts thereof. And upon the determination of this agreement, whether by expiration of the patents of the said Henry, obtained or to be obtained as aforesaid, 80 or by dissolution of the said Troy Iron and Nail Factory, such real estate, additions, and improvements shall be valued by indifferent persons, one to be chosen by each party; and in case of disagreement the two so chosen to elect an umpire, unless the said parties otherwise agree respecting them; and the share of the party of the first part, so f. 152) to be ascertained, shall be paid to him, his executors, administrators, or assigns. And it is further mutually agreed between the parties to these presents, that this agreement shall be so construed as to be deemed to have been entered into and commenced on the first day of July, in the year one thousand eight hundred and thirty-five. And it is further mutually agreed between the said parties, that all previous agreements and contracts between them shall be deemed to be, and the same are hereby, rescinded and annulled.

In testimony whereof the said Henry Burden has hereunto set his f. 153) hand and seal, and the said Troy Iron and Nail Factory have caused their common seal to be affixed to these presents, the day and year first above written.

JOHN TOWNSEND, *Prest.* [L. S.] 81
H. BURDEN. [L. S.]

Sealed and delivered in the presence of—
TEUNIS VAN VECHTEN.

Schedule B, referred to in the annexed answer.

Agreement made this fourteenth day of October, 1845, between Henry Burden of the one part, and Erastus Corning, James Horner, and John F. Winslow of the other part. Whereas a suit is now pending in the circuit court of the United States, for the northern district of New f. 154) York, in favor of the said Henry Burden, against the said Corning, Horner, and Winslow, arising out of the alleged violation and infringement of a patent right claimed by said Burden for making of spike, both parties claiming the right to make said spike: It is now agreed between the said parties that the said suit shall be and is 82 hereby discontinued, each party paying their own costs. And it is further agreed, that the said parties may each hereafter manufacture and vend spikes of such kind and character as they see fit, notwithstanding their conflicting claims to this time; and the said John F. Winslow claiming as patentee to have the right for the benefit of the said Corn- f. 155) ing, Horner, and himself, to manufacture the patent horse shoe,

and the said Henry Burden also claiming such right exclusively, it is severally agreed by said Corning, Horner, and Winslow, that said Burden may manufacture said patent horse shoes, and that said Corning, Horner, and Winslow will not manufacture them. And each party, in consideration of the premises, hereby releases to the other or others all claim, demand, and cause of action, by reason of any violation of the patent rights claimed by them as aforesaid to the date hereof.

H. BURDEN.

Dated Oct. 14th, 1845.

f. 156) *Schedule C, referred to in the annexed answer.*

The Troy Iron and Nail Factory, by Henry Burden, their agent, duly authorized, in consideration of fifteen hundred dollars to be 83 paid to them by Erastus Corning, of the city of Albany, as hereinafter mentioned, do hereby agree to sell to the said Erastus Corning by release and conveyance, with covenants against their own acts, the undivided one half part of a certain premises which the said company agree they now hold and own, known as their wharf property, in the town of Greenbush, in the f. 157) county of Rensselaer, near the southerly bounds of the city of Troy, bounded on the east by the Troy and Greenbush railroad, on the west by Hudson's river, on the north by the northerly line of the old dock or wharf of said company, and extending thence southerly along Hudson's river one thousand feet with the wharves thereon, and all the rights and appurtenances thereto belonging. And the said Erastus Corning may at once take possession of and use said premises so agreed to be sold and conveyed to him, and any claim for the past use thereof by said Corning, or the Albany Iron and Nail Works, is hereby discharged. The said Erastus Corning agrees to pay said Troy Iron and Nail Factory the sum of one thousand five hundred dollars for said f. 158) premises, with interest from this day, on delivery of the deed therefor.

H. BURDEN, *Agent.* 84

Dated October 14th, 1845.

Schedule D, referred to in the annexed answer.

Statement of the quantity of hook-headed or brad-headed spike, from and including the 15th day of October, 1845, to July 8th, 1848, made and sold by defendants, with names and residence of purchasers.

	Quantity in pounds.	Residence of purchaser.	Price in dollars, &c.
f. 159) Housatonic R. R. Co.	245,439	.....	$11,044 75
Western R R. Corporation.	64,980	.....	2,924 10
Merritt & Co.	112,172	New York.....	5,047 74
Pittsfield and North Adams R. R. Co.	90,891	.....	4,090 09
Pratt & Brothers.	1,900	Baltimore, Md...	85) 85 50
Fall River R. R. Co.	130,818	.....	5,886 81
f. 160) Philadelphia, Wilmington, and Baltimore R. R. Co.	10,118	.....	480 60
Providence and Worcester R. R. Co.	293,772	.....	13,219 74
Corning, Horner & Co.	1,169,214	Albany, N. Y....	52,614 63
J. B. Harriss.	5,100	Springfield, Mass.	229 50
Hartford and New Haven R. R. Co.	40,000	.....	1,800 00
Harlaem R. R. Co.	34,600	.....	1,557 00
f. 161) Boston and Worcester R. R. Co.	153,796	.....	6,920 82
Norwich and Worcester R. R. Co.	16,558	.....	745 11
Boston and Maine R. R. Co.	102,014	.....	4,590 63
Syracuse and Utica R. R. Co.	77,303	.....	86) 3,478 63
Utica and Schenectady R. R. Co.	12,600	.....	567 00
Sherman & Morris.	131,410	New York.....	5,913 45
f. 162) A. S. Winslow.	37,236	Cincinnati, Ohio.	1,675 62
St. Lawrence and Champlain R. R. Co.	42,217	.....	1,899 76
Long Island R. R. Co	10,933	.....	491 99
C. H. & George Abbots.	5,000	Philadelphia.....	225 00
Worcester and Nashua R. R. Co.	90,539	.....	4,074 25
Sulworth Iron Co.	1,000	Maryland.....	45 00
f. 163) J. R. Trimble.	7,800	Wilmington, Del.	351 00
Connecticut River R. R. Co.	4,000	.....	180 00
Frink, Wright, Fuller and Co.	93,325	Bridgeport, Conn.	87) 4,199 63
Auburn and Syracuse R. R. Co.	61,442	.....	2,764 89
Richmond and Petersburgh R. R. Co.	400	.....	18 00
	$3,046,577	.....	$137,121 24

f. 164) CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

In equity.

The replication of the Troy Iron and Nail Factory, to the joint and several answers of Erastus Corning, James Horner, and John F. Winslow, to the bill of complaint of the Troy Iron and Nail 88 *Factory, complainant.*

This repliant, saving and reserving to itself, now and at all times hereafter, all and all manner of benefit and advantage of exception, which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says, that it will aver, maintain, and

prove its bill of complaint to be true, certain, and sufficient in the law to be answered unto; and that the said answer of the said defendants, f. 165) is uncertain, untrue, and insufficient to be replied unto by this repliant; without that, that any other matter or thing whatsoever, in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all which matters and things this repliant is and will be ready to aver, maintain, and prove as this honorable court shall direct; and humbly prays as in and by its said bill it has already prayed.

C. STEVENS, *Complainant's Solicitor.* 89
S. STEVENS, *of Counsel.*

The President of the United States of America, to Azor Ta-
f. 166) [L. S.] bor, esq., of the city of Albany, counsellor at law, greeting:

Know ye, that in confidence of your prudence and fidelity, you have been appointed, and by these presents you are invested with full power and authority, to take the testimony of the respective parties in a certain cause now pending in the circuit court of the United States, for the northern district of the State of New York, in equity, wherein the Troy Iron and Nail Factory is complainant, and Erastus Corning, John F. Winslow, and James Horner are defendants, without written interrogatories, the said parties having agreed and stipulated that the witnesses for the respective parties may be examined by the counsel for said par-
f. 167) ties before you orally and without written interrogatories. 90

Therefore, you are hereby commanded, that you, on such days and at such places as to you may seem meet and proper for that purpose, take the said testimony and return the same annexed to this writ, closed up under your seal, into the said circuit court, before the judges thereof, with all convenient speed.

Witness the honorable Roger B. Taney, chief justice of the Supreme Court of the United States, at the city of Albany, the 20th day of October, 1848.

ANSON LITTLE, *Clerk.*

f. 168) UNITED STATES OF AMERICA,
Northern district of New York, ss.

Depositions and evidence taken under and by virtue of the preceding annexed commission, before me, Azor Tabor, the commissioner therein named, at the city and in the county of Albany, in the said district, in a cause pending in the circuit court of the United States, for the said northern district of New York, in equity, wherein the Troy Iron and Nail Factory is complainant, and Erastus Corning, John F. Winslow, and James Horner are defendants. 91

f. 169) And now, on this fifth day of June, in the year one thousand eight hundred and forty-nine, a day by me for such purpose appointed,

duly appear before me, the said commissioner, at the place aforesaid, the said the Troy Iron and Nail Factory, by Samuel Stevens, esquire, their counsel, and the said Erastus Corning, John F. Winslow, and James Horner, by David L. Seymour and William H. Seward, esqrs., their counsel; and the complainant gives in evidence an exemplification of a judgment in the circuit court of the United States, for the northern district of New York, in which Henry Burden is plaintiff, and the present defendants are the defendants; a copy of which, to be read with the same effect as the original, is marked exhibit No. 1, and hereto f. 170) annexed. To which last named evidence, the defendants in due time object, as irrelevant and inadmissible to any issue in this cause. The evidence is taken subject to the objection and to the decision of the court thereon.

Complainant's exhibit No. 1. 92

To all to whom these presents shall come, greeting:

Know ye, that I, Anson Little, clerk of the circuit court of the United States, for the northern district of New York, in the second circuit, having inspected the records of my office, do find there on file a certain f. 171) judgment record in the words and figures following, that is to say:

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

Pleas before the judges of the circuit court of the United States, for the northern district of New York, at Canandaigua, in the county of Ontario, of June term, in the year one thousand eight hundred and forty-one. 93

Present, honorable Smith Thompson, circuit judge.
ANSON LITTLE, *Clerk.*

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

Of the tenth day of September, as of June term, one thousand eight hundred and forty-one.

f. 172) CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York, ss.

Henry Burden, a citizen of the United States, plaintiff in this suit, by David Buel, junior, his attorney, commences this his action against Erastus Corning, John F. Winslow, and James Horner, defendants in said suit, by filing this his declaration in the office of the clerk of this court, according to the rules of the court, and complains of the said 94 defendants of a plea of trespass on the case.

For that whereas the said plaintiff, a citizen of the United States, f. 173) before and at the time of the making the letters patent as herein-

after set forth, was the original and first inventor or discoverer of new and useful improvements in the machinery of making hook or brass-headed spikes, to wit, at the city of Troy, and within the district aforesaid; and thereupon, heretofore, to wit, on the eighteenth day of August, one thousand eight hundred and forty, at the city of Washington, to wit, at Troy, f. 174) and within the district aforesaid, upon the application of the said plaintiff to the Commissioner of Patents, letters patent were duly issued in the name of the United States of America, signed by J. L. Martin, acting as Secretary of State, and countersigned by Henry L. Ellsworth, Commissioner of Patents, and sealed with the seal of the Patent Office of the said United States, bearing date the second day of September, one thousand eight hundred and forty, at Washington, aforesaid, to wit, at the city of Troy, and within the district aforesaid, which the said 95 plaintiff brings here into court, duly signed, issued, and tested as aforesaid, according to the form of the statute in such case made and pro- f. 175) vided, wherein and whereby was granted to the said plaintiff, his heirs, administrators, or assigns, for the term of fourteen years from the second day of March, one thousand eight hundred and forty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements to which letters patent are annexed and making part of the same. The specification in which said improvement and invention are fully and correctly set forth and described in language of the following import and to the following effect, namely:

To all whom it may concern:

f. 176) Be it known, that I, Henry Burden, of the city of Troy, in the county of Rensselaer, in the State of New York, have invented certain improvements in the machine for manufacturing wrought iron spikes, by means of which improved machine they are made with 96 hook or brad heads, and I do hereby declare that the following is a full and exact description thereof:

In my improved machine, the feeding in of the rod, the cutting it off, and the pointing the spike, are effected in the way previously used by me for performing the same offices in my ordinary spike machines f. 177) and adopted by others, and my improvement for forming the spikes with hook or brad head may be applied to spike machines of various constructions. Before the introduction of my improvement the heads of hook or brad-headed spikes were, so far as I am informed, always made by hand, and they were necessarily imperfect, being deficient in that uniformity in shape and strength which are important requisites. My improvement in manufacturing them consists principally in the employment of what I denominate a bending lever, or some analogous device, by means of which the portion of the rod which is to f. 178) constitute the head is bent down so as to form an angle 97 with the shank, and in then forcing up a heading die properly formed so as to upset the bent portion, and to cause it to assume the desired shape. In the accompanying drawings, figure 1 is a top view of the

duly appear before me, the said commissioner, at the place aforesaid, the said the Troy Iron and Nail Factory, by Samuel Stevens, esquire, their counsel, and the said Erastus Corning, John F. Winslow, and James Horner, by David L. Seymour and William H. Seward, esqrs., their counsel; and the complainant gives in evidence an exemplification of a judgment in the circuit court of the United States, for the northern district of New York, in which Henry Burden is plaintiff, and the present defendants are the defendants; a copy of which, to be read with the same effect as the original, is marked exhibit No. 1, and hereto f. 170) annexed. To which last named evidence, the defendants in due time object, as irrelevant and inadmissible to any issue in this cause. The evidence is taken subject to the objection and to the decision of the court thereon.

Complainant's exhibit No. 1. 92

To all to whom these presents shall come, greeting:

Know ye, that I, Anson Little, clerk of the circuit court of the United States, for the northern district of New York, in the second circuit, having inspected the records of my office, do find there on file a certain f. 171) judgment record in the words and figures following, that is to say:

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

Pleas before the judges of the circuit court of the United States, for the northern district of New York, at Canandaigua, in the county of Ontario, of June term, in the year one thousand eight hundred and forty-one. 93

Present, honorable Smith Thompson, circuit judge.

ANSON LITTLE, *Clerk.*

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

Of the tenth day of September, as of June term, one thousand eight hundred and forty-one.

f. 172) CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York, ss.

Henry Burden, a citizen of the United States, plaintiff in this suit, by David Buel, junior, his attorney, commences this his action against Erastus Corning, John F. Winslow, and James Horner, defendants in said suit, by filing this his declaration in the office of the clerk of this court, according to the rules of the court, and complains of the said 94 defendants of a plea of trespass on the case.

For that whereas the said plaintiff, a citizen of the United States, f. 173) before and at the time of the making the letters patent as herein-

after set forth, was the original and first inventor or discoverer of new and useful improvements in the machinery of making hook or brass-headed spikes, to wit, at the city of Troy, and within the district aforesaid; and thereupon, heretofore, to wit, on the eighteenth day of August, one thousand eight hundred and forty, at the city of Washington, to wit, at Troy, f. 174) and within the district aforesaid, upon the application of the said plaintiff to the Commissioner of Patents, letters patent were duly issued in the name of the United States of America, signed by J. L. Martin, acting as Secretary of State, and countersigned by Henry L. Ellsworth, Commissioner of Patents, and sealed with the seal of the Patent Office of the said United States, bearing date the second day of September, one thousand eight hundred and forty, at Washington, aforesaid, to wit, at the city of Troy, and within the district aforesaid, which the said 95 plaintiff brings here into court, duly signed, issued, and tested as aforesaid, according to the form of the statute in such case made and pro- f. 175) vided, wherein and whereby was granted to the said plaintiff, his heirs, administrators, or assigns, for the term of fourteen years from the second day of March, one thousand eight hundred and forty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements to which letters patent are annexed and making part of the same. The specification in which said improvement and invention are fully and correctly set forth and described in language of the following import and to the following effect, namely:

To all whom it may concern:

f. 176) Be it known, that I, Henry Burden, of the city of Troy, in the county of Rensselaer, in the State of New York, have invented certain improvements in the machine for manufacturing wrought iron spikes, by means of which improved machine they are made with 96 hook or brad heads, and I do hereby declare that the following is a full and exact description thereof:

In my improved machine, the feeding in of the rod, the cutting it off, and the pointing the spike, are effected in the way previously used by me for performing the same offices in my ordinary spike machines f. 177) and adopted by others, and my improvement for forming the spikes with hook or brad head may be applied to spike machines of various constructions. Before the introduction of my improvement the heads of hook or brad-headed spikes were, so far as I am informed, always made by hand, and they were necessarily imperfect, being deficient in that uniformity in shape and strength which are important requisites. My improvement in manufacturing them consists principally in the employment of what I denominate a bending lever, or some analogous device, by means of which the portion of the rod which is to f. 178) constitute the head is bent down so as to form an angle 97 with the shank, and in then forcing up a heading die properly formed so as to upset the bent portion, and to cause it to assume the desired shape. In the accompanying drawings, figure 1 is a top view of the

machine, and figures 2 and 3 are sectional side views or elevations from end to end along a line extending from *a* to *b* in figure 1. In each of these figures, when like parts are shown, they are designated by the same letters of reference. AA is the bed plate upon which most of the operating parts of the machine are sustained; BB are the dies which f. 179) grip and hold the spike rod during the time the bending and heading are effected; C is a lever by which the die B is closed, the die B being stationary. This lever is acted upon by the segmental cam D in the driving shaft E of the machine; the frame FF, which holds the die B, works on a joint rod *cc*, and is lifted by the strap *dd*, attached by the joint pin *e*, to the lever C. The spike rod, *f*, is to be fed into the f. 180) dies in the usual way, and as soon as the dies are closed 98 upon the piece to be headed, the bending lever, G, has its outer end, *h*, raised by the cam H on the shaft E, which causes its end, *g*, to descend upon the projecting end of the spike rod, and to bend it down in the manner shown in figure 2. I, is the heading slide which carries the heading die, J, and as soon as the cam H escapes from the outer end of the bending lever *h*, and that end descends, the cam K comes into contact with the end L, of the heading slide, which it forces forward f. 181) and the head of the spike is completed as represented in figure 4 [meaning figure 3.] M is a spring, which serves to draw the heading slide back when it is released from the action of the cam K. The exact form of the head will necessarily be determined by that of the heading die, and by the cavity in the gripping dies, within which the metal is upset by the heading die, and may be varied at pleasure. Having thus fully described the manner in which I in general construct my machine for the making of hook or brad-headed spikes, and 99 f. 182) having given that form thereof which, after numerous experiments, I have deemed to be best, I will observe that it will be manifest to every competent machinist, that considerable variation may be made in the manner of arranging and operating the respective parts, whilst it would remain substantially the same in all its essential characteristics; and I do not intend, therefore, by the foregoing description, to f. 183) confine or limit myself to the precise form and arrangement of the parts herein shown, but hold myself at liberty to vary them as I may think proper, whilst I attain the same end by analogous means. What I claim, therefore, in the above described machine, as constituting my invention, and which I desire to secure by letters patent, is the bending of that portion of the end of the spike rod, from which a hook or brad-headed spike is to be formed, by means of what I have denominated the bending lever, or by some analogous device, operating substantially in the manner and for the purpose herein set forth: and in combination therewith I also claim the so forming of the heading 100 die and of the parts of the gripping dies within which the bent part is f. 184) to be upset, as to give the proper shape to the hook or brad head to be thus formed.

In testimony whereof I hereunto set my hand, this eighteenth day of August, 1840.

H. BURDEN.

Witnesses—THOS. P. JONES,
GEORGE WEST.

And the said plaintiff says that he always did, from the granting of said letters patent as aforesaid, use and enjoy the right, liberty and privilege aforesaid, of the new and useful improvements in the machinery for making hook or brad-headed spikes, in the manner and form set forth and described in said specification, and patented by him as aforesaid, and did make great profit thereby, and did by himself and f. 185) agents always keep on hand, and for sale at reasonable prices, large quantities of said machinery and spikes made thereby, with which 101 the public might be supplied; and was at all times ready and willing to grant to others, at reasonable prices, the same right and liberty of constructing and using, and vending to others to be used, the said new and useful improvements in the machinery for manufacturing or making hook or brad-headed spikes as aforesaid, and the spikes made and manufactured thereby, to wit, at the city and within the district aforesaid; f. 186) and was ready and able to execute and fulfil all orders which might be given him for said new and useful improvements, and for the spikes which might be made by the same. Yet the said defendants, well knowing the premises, but contriving and wrongfully and injuriously intending to injure the said plaintiff, and deprive him of the profits, benefits, and advantages which he might and would have otherwise derived and acquired from the exclusive making, using, and vending to others to be used, the said new and useful improvements in the f. 187) machinery for making hook or brad-headed spikes described in said specification, and patented as aforesaid, and the spikes manu- 102 factured thereby, after the said second day of March, in said letters patent, and within the term of time in said letters patent mentioned, to wit, on the third day of March, one thousand eight hundred and forty, at the city of Troy, and within the district aforesaid, did make, construct, and use, and caused to be made, constructed, and used, two machines for making and manufacturing spikes, after the form and model, f. 188) and in imitation of the plaintiff's improvements in the machine and specification aforesaid, and each having in them the same new and useful improvements in the machinery for making hook or brad-headed spikes patented by the plaintiff as aforesaid, and did thereby on the said third day of March, and on divers other times and days, and on every day between that day and the commencement of this suit, make one hundred tons of iron spikes after the form and in imitation of the spikes made by the said new and useful improvements in the machinery f. 189) patented by the said plaintiff; and did, on the days and at the place aforesaid, sell and dispose of the said spikes, unlawfully and 103 unjustly, without the permission or license in writing or otherwise of the said plaintiff, in breach of the aforesaid letters patent, and in vio-

machine, and figures 2 and 3 are sectional side views or elevations from end to end along a line extending from *a* to *b* in figure 1. In each of these figures, when like parts are shown, they are designated by the same letters of reference. AA is the bed plate upon which most of the operating parts of the machine are sustained; BB are the dies which f. 179) grip and hold the spike rod during the time the bending and heading are effected; C is a lever by which the die B is closed, the die B being stationary. This lever is acted upon by the segmental cam D in the driving shaft E of the machine; the frame FF, which holds the die B, works on a joint rod *cc*, and is lifted by the strap *dd*, attached by the joint pin *e*, to the lever C. The spike rod, *f*, is to be fed into the f. 180) dies in the usual way, and as soon as the dies are closed 98 upon the piece to be headed, the bending lever, G, has its outer end, *h*, raised by the cam H on the shaft E, which causes its end, *g*, to descend upon the projecting end of the spike rod, and to bend it down in the manner shown in figure 2. I, is the heading slide which carries the heading die, J, and as soon as the cam H escapes from the outer end of the bending lever *h*, and that end descends, the cam K comes into contact with the end L, of the heading slide, which it forces forward f. 181) and the head of the spike is completed as represented in figure 4 [meaning figure 3.] M is a spring, which serves to draw the heading slide back when it is released from the action of the cam K. The exact form of the head will necessarily be determined by that of the heading die, and by the cavity in the gripping dies, within which the metal is upset by the heading die, and may be varied at pleasure. Having thus fully described the manner in which I in general construct my machine for the making of hook or brad-headed spikes, and 99 f. 182) having given that form thereof which, after numerous experiments, I have deemed to be best, I will observe that it will be manifest to every competent machinist, that considerable variation may be made in the manner of arranging and operating the respective parts, whilst it would remain substantially the same in all its essential characteristics; and I do not intend, therefore, by the foregoing description, to f. 183) confine or limit myself to the precise form and arrangement of the parts herein shown, but hold myself at liberty to vary them as I may think proper, whilst I attain the same end by analogous means. What I claim, therefore, in the above described machine, as constituting my invention, and which I desire to secure by letters patent, is the bending of that portion of the end of the spike rod, from which a hook or brad-headed spike is to be formed, by means of what I have denominated the bending lever, or by some analogous device, operating substantially in the manner and for the purpose herein set forth: and in combination therewith I also claim the so forming of the heading 100 die and of the parts of the gripping dies within which the bent part is f. 184) to be upset, as to give the proper shape to the hook or brad head to be thus formed.

In testimony whereof I hereunto set my hand, this eighteenth day of August, 1840.

H. BURDEN.

Witnesses—THOS. P. JONES,
GEORGE WEST.

And the said plaintiff says that he always did, from the granting of said letters patent as aforesaid, use and enjoy the right, liberty and privilege aforesaid, of the new and useful improvements in the machinery for making hook or brad-headed spikes, in the manner and form set forth and described in said specification, and patented by him as aforesaid, and did make great profit thereby, and did by himself and f. 185) agents always keep on hand, and for sale at reasonable prices, large quantities of said machinery and spikes made thereby, with which 101 the public might be supplied; and was at all times ready and willing to grant to others, at reasonable prices, the same right and liberty of constructing and using, and vending to others to be used, the said new and useful improvements in the machinery for manufacturing or making hook or brad-headed spikes as aforesaid, and the spikes made and manufactured thereby, to wit, at the city and within the district aforesaid; f. 186) and was ready and able to execute and fulfil all orders which might be given him for said new and useful improvements, and for the spikes which might be made by the same. Yet the said defendants, well knowing the premises, but contriving and wrongfully and injuriously intending to injure the said plaintiff, and deprive him of the profits, benefits, and advantages which he might and would have otherwise derived and acquired from the exclusive making, using, and vending to others to be used, the said new and useful improvements in the f. 187) machinery for making hook or brad-headed spikes described in said specification, and patented as aforesaid, and the spikes manu- 102 factured thereby, after the said second day of March, in said letters patent, and within the term of time in said letters patent mentioned, to wit, on the third day of March, one thousand eight hundred and forty, at the city of Troy, and within the district aforesaid, did make, construct, and use, and caused to be made, constructed, and used, two machines for making and manufacturing spikes, after the form and model, f. 188) and in imitation of the plaintiff's improvements in the machine and specification aforesaid, and each having in them the same new and useful improvements in the machinery for making hook or brad-headed spikes patented by the plaintiff as aforesaid, and did thereby on the said third day of March, and on divers other times and days, and on every day between that day and the commencement of this suit, make one hundred tons of iron spikes after the form and in imitation of the spikes made by the said new and useful improvements in the machinery f. 189) patented by the said plaintiff; and did, on the days and at the place aforesaid, sell and dispose of the said spikes, unlawfully and 103 unjustly, without the permission or license in writing or otherwise of the said plaintiff, in breach of the aforesaid letters patent, and in vio-

lation and infringement of the rights, privileges, and liberty so as aforesaid granted by said letters patent, contrary to the form and effect of the statute in such case made and provided, whereby the said plaintiff has been greatly injured and deprived of great profits, which he might f. 190) and would have acquired, and from the said new and useful improvements in the machinery for making hook or brad-headed spikes in said specification described, and by means of the defendants making, constructing, and using as aforesaid, the improvements in the machinery patented by the said plaintiff as aforesaid, and vending the spikes made and manufactured thereby, the said plaintiff says that he has sustained actual damages to the value of five thousand dollars, whereby and by force of the statute in such case made and provided, the plaintiff 104 f. 191) claims to recover the sum of fifteen thousand dollars, being three times the actual damages sustained by the aforesaid plaintiff. Yet the said defendants, though often requested, &c., have not paid the said plaintiff the said sum of fifteen thousand dollars, or any part thereof, but they the same to pay wholly have and still do refuse, to the damage of the said plaintiff of fifteen thousand dollars, and therefore brings suit, &c.

D. BUEL, JR.,
Plaintiff's attorney.

Oyer.

THE UNITED STATES OF AMERICA:

To all to whom these letters patent shall come:

Whereas Henry Burden, of Troy, New York, has alleged that he f. 192) has invented new and useful improvements in the machinery for making hook or brad-headed spikes, which he states had not been known or used before his application; has made oath that he is a 105 citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvements; that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Com- f. 193) missioner of Patents, signifying a desire of obtaining an exclusive property in the said improvements, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Henry Burden, his heirs, administrators, or assigns, for the term of fourteen years from the second day of March, one thousand eight hundred and forty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements, a description whereof is given in the words of the said Henry Burden in the schedule hereunto annexed, and is made a part of these presents. 106

f. 194) In testimony whereof I have caused these letters to be made [L. S.] patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington, the second day of September, in the year of our Lord one thousand eight hundred and forty, and of the independence of the United States of America the sixty-fifth.

J. L. MARTIN,
Acting Secretary of State.

Countersigned and sealed with the seal of the Patent office.

HENRY L. ELLSWORTH, 107
Commissioner of Patents.

UNITED STATES CIRCUIT COURT,
Northern district of New York.

ERASTUS CORNING, John F. Winslow, and James Horner, ads.
HENRY BURDEN.

And the said Erastus Corning, John F. Winslow, and James Horner, f. 194) defendants in this suit, by Harris & Rhoades, their attorneys, come and defend the wrong and injury, when, &c., and say that they are not guilty of the said supposed grievances above laid to their charge in manner and form as the said Henry Burden hath above thereof in declaring against them complained, and of this they the said defendants put themselves upon the country, and the said plaintiff doth the like, &c.

HARRIS & RHOADES, 108
Defendant's attorneys.

SIR: Please take notice that on the trial of this cause, the above f. 195) named defendants will, under the plea of the general issue above pleaded, insist upon and give in evidence that the pretended new and useful improvements in the machinery for making hook or brad-headed spikes, mentioned and referred to in the said plaintiff's declaration, was not originally discovered or invented by the said Henry Burden. Also, that the said pretended new and useful improvement, or the material or essential parts or portions thereof, or some or one of them, had been known and used in this country, viz., in the States of Massachusetts, New York, New Jersey, Pennsylvania, Connecticut, and Rhode Island, before the application of the said Henry Burden for a patent, f. 196) and before any letters patent were granted to the said Henry Burden, if any were ever granted, as set forth in the said declaration, and also before the alleged invention or supposed discovery thereof by the said Henry Burden. And further, that the said alleged new 109 and useful improvement, or the material or essential parts or portions thereof, or some or one of them, or the principle thereof, was the invention or discovery of some other person; that the said alleged new and useful improvement, or the material or essential parts or portions thereof, or some or one of them, had been known previous to the application of f. 197) the said Henry Burden for letters patent therefor, to Israel Blanchard, William Ilir, and Thomas Osgood, of the city of Troy, in

the State of New York; to Hiram Chubbock, of the city of Boston, in the State of Massachusetts; to William Osgood, of Amesbury, in the State of Massachusetts; to Joshua H. Butterworth, of Dover, in the State of New Jersey; to Richard Savary, of Pittsburgh, in the State of Pennsylvania, and to divers other persons in the United States. And that the said alleged new and useful improvement, or the material or
f. 198) essential parts or portions thereof, or some or one of them, had been used previous to the application of the said Henry Burden for letters patent therefor, at the city of Troy aforesaid, and in the 110 city of Boston aforesaid, and in the city of Pittsburgh aforesaid, and in the said town of Dover, in the State of New Jersey, and in other places in the United States; and that the said machine for making and manufacturing hook or brad-headed spikes, constructed and used by the said defendants, as stated and set forth in the said declaration, had been constructed and put in use by the said defendants prior to the application of the
f. 199) said Henry Burden for a patent, and that the said machines had been so used by the said defendants for more than two years prior to the application of the said Henry Burden for a patent for the said alleged new and useful improvement. And further, that the said patent is void, because in and by the said specification or description therein referred to no distinction or discrimination is made between the parts and portions previously known and used as aforesaid, and any
f. 200) parts or portions of which the said Henry Burden may be the inventor or discoverer; the said defendants at the same time pro- 111 testing that the said Henry Burden is not and has not been the inventor or discoverer of any part or portion of the said alleged improvement; and further, that the said patent is void, because the said specification or description does not describe the improvement of which the said plaintiff claims to be the inventor or discoverer, in such clear, full, and exact terms as to distinguish the same from all other things before
f. 201) known, so as to enable a person skilled in the art or science of which it is a branch, or with which it is most nearly connected, to make and use the same.

Therefore the issue above joined is ordered by the said circuit court to be tried at the next term thereof, to be held at the city of Albany, in and for said northern district of New York, on the eighteenth day of October next.

And thereupon, afterwards, to wit, at a circuit court held at the City
f. 202) Hall, in the city of Albany, in and for the northern district 112 of New York, on the 18th day of October, 1842, before the honorable Smith Thompson, one of the judges of the circuit court of the United States, for the northern district of New York, appointed to hold the said circuit according to the form of the statute in such case made and provided; the aforesaid issue so joined between the said parties as aforesaid came on to be tried by a jury for that purpose duly empanneled; at which day came as well the said plaintiff as the said defendants, by their respective attorneys aforesaid, and the jurors of the jury aforesaid empan-
f. 203) neled to try the said issue being called, also came, and were then

and there in due manner chosen and sworn to try the same issue, and upon the trial of that issue, the counsel learned in the law for the said plaintiff, to maintain and prove the said issue on his part, produced and gave in evidence certain letters patent; with a schedule or specification thereunto annexed, which said letters patent and schedule or specification are in the words and figures following, to wit: 113

THE UNITED STATES OF AMERICA:

f. 204) To all to whom these letters patent shall come:

Whereas, Henry Burden, of Troy, New York, has alleged that he has invented new and useful improvements in the machinery for making hook or brad-headed spikes, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvements, and that the same hath not, to the best of his knowledge and belief, been previously f. 205) known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property 114 in the said improvement, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Henry Burden, his heirs or administrators or assigns, for the term of fourteen years from the second day of March, one thousand eight hundred and forty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvements, a de- f. 206) scription whereof is given in the words of the said Henry Burden in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington, this second day of September, in the year of our Lord one thousand eight hundred 116 and forty, and of the independence of the United States of America the sixty-fifth.

J. L. MARTIN,
Acting Secretary of State.

f. 207) Countersigned and sealed with the seal of the Patent Office.

HENRY L. ELLSWORTH,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.

To all to whom it may concern:

Be it known that I, Henry Burden, of the city of Troy, in the county of Rensselaer, in the State of New York, have invented certain improvements in the machine for manufacturing wrought iron spikes,

by means of which improved machine they are made with hook or brad heads, and I do hereby declare that the following is a full 117 and exact description thereof: In my improved machine, the feeding in of the rods, the cutting it off and the pointing the spike, are effected f. 208) in the way previously used by me for performing the same offices in my ordinary spike machines, or adopted by others, and my improvement for forming the spike with hook or brad heads may be applied to spike machines of various constructions.

Before the introduction of my improvement, the heads of hook or brad-headed spikes were, so far as I am informed, always made by hand, and they were necessarily imperfect, being deficient in that uniformity in shape and strength which are important requisites. My improvement in manufacturing them consists principally in the employment of what I denominate a bending lever, or some analogous f. 209) device, by means of which the portion of the rod which is to constitute the head is bent down so as to form an angle with the shank, and in then forcing up a heading die, properly formed, so as to upset 118 the bent portion and to cause it to assume the desired shape.

In the accompanying drawings fig. 1 is a top view of the machine, and figs. 2 and 3 are sectional side views or elevations from end to end along a line extending from A to B in figure 1; in each of these figures f. 210) when like parts are shown, they are designated by the same letter of reference. AA is the bed plate upon which most of the operating parts of the machine are sustained; BB are the dies which grip and hold the spike rod during the time the bending and heading are effected; C is a lever by which the die B is closed, the die B being f. 211) stationary. This lever is acted upon by the segmental cam D, on the driving shaft E of the machine; the frame FF, which holds the die B, works on a joint rod CC, and is lifted up by the strap *dd* attached by the joint pin *e* to the lever *c*. The spike rod *f* is to be fed into the dies in the usual way, as soon as the dies are closed upon the piece to be headed, the bending lever G has its outer end *h* raised by the cam H on the shaft E, which causes its end *g* to descend upon the projecting end of the spike rod, and to bend it down in the manner shown f. 212) in fig. 2; I is the heading slide which carries the heading die J, and as soon as the outer cam H escapes from the outer end of the 119 bending lever *h*, and that end descends, the cam K comes into contact with the end L of the heading slide which it forces forward, and the head of the spike is completed as represented in fig. 4, (meaning figure 3;) M is a spring which serves to draw the heading slide back when it is released from the action of the cam K. The exact form of the head will necessarily be determined by that of the heading die, and by the f. 213) cavity in the gripping dies within which the metal is upset by the heading die, and may be varied at pleasure.

Having thus fully described the manner in which I in general construct my machine for the making of hook or brad-headed spikes, and having given that form thereof which, after numerous experiments, I have deemed to be the best, I will observe, that it will be manifest to every competent machinist that considerable variation may be made in

the manner of arranging and operating the respective parts, whilst it would remain substantially the same in all its essential characteristics; and I do not intend, therefore, by the foregoing description, to con- 120 f. 214) fine or to limit myself to the precise form or arrangement of the parts herein shown, but hold myself at liberty to vary them as I may think proper, whilst I attain the same end by analogous means.

What I claim, therefore, in the above described machine, as constituting my invention, and which I desire to secure by letters patent, is the bending of that portion of the end of the spike rod from which a hook or brad-headed spike is to be formed, by means of what I have f. 215) denominated the bending lever, or by some analogous device, operating substantially in the manner and for the purpose herein set forth; and in combination therewith I also claim the so forming of the heading die, and of the parts of the gripping dies within which the bent part is to be upset, as to give the proper shape to the hook or brad head to be thus formed.

In testimony whereof I hereunto set my hand, this eighteenth day of August, 1840.

H. BURDEN.

Witness—THOS. P. JONES,
GEORGE WEST.

f. 216) And further to prove the said issue, the said counsel for 121 the plaintiff called as a witness on behalf of the said plaintiff—

Joseph Calvert, who, having been duly sworn, testified as follows: I am a millwright; I am somewhat acquainted with the plaintiff's machine for making hook-headed spikes. The model produced in court is a correct model of the machine; I have examined the specification annexed to the letters patent granted to the plaintiff. It correctly describes the machine represented by the model. The bender in this machine is moved by a cam attached to the crank; it falls back its own weight; it makes hook-headed spikes perfectly. I do not know when f. 217) the bender was first applied in the way it is used on the machine.

On his cross examination the said witness testified as follows: I made the pattern for the machine in November, 1837; there was no bender upon it then; it was then a common spike machine; I have seen the defendants' spike machines; they were in operation before I made the pattern in the fall of 1837, but I do not know what kind of spikes f. 218) they made; I never saw any machinery for making hook- 122 headed spikes at the defendants' works before the year 1837.

Marcus Hogle, having been sworn as a witness for the plaintiffs, testified as follows:

My occupation is making spikes; I have worked for the plaintiff fifteen or sixteen years; we made the first hook-headed spikes upon an order in October, 1836; these were made by the header operating as a bender; they were imperfect; the first bending lever separately from the header was put on the machine in the spring of 1838; the lever

then used was the short lever attached to the pointing lever, which received its motion from the crank; in the spring of 1838, good spikes f. 219) were made with the short lever; the separate bending lever could not be used on the plaintiff's old machines. During the summer and early in the fall of 1838, a large quantity of railroad spikes were 123 made with the short lever; in August, 1841, I saw a machine in operation in the defendants' factory making hook-headed spikes; the heading part of the machine was the same as that upon the plaintiff's machine; it is correctly represented by the model; the defendants' factory is about three hundred yards below the plaintiff's factory, on the same stream.

William Gibson, being sworn as a witness for the plaintiff, testified f. 220) as follows:

I am acquainted with the business of spike-making in the plaintiff's factory; I have been employed in that factory since the year 1831; in 1832, a small quantity of hook-headed spikes were made upon the old machine, but they were too imperfect for use; in 1833 and 1834, similar attempts to make hook-headed spikes were made; in 1836, some improvements were made, but still the spikes were very imperfect; a new machine was made in December, 1837, and put in operation in f. 221) the spring of 1838, upon which hook-headed spikes were made in the months of May, June, and July, of that year; one keg of hook-headed spikes was sent away as a sample on the eleventh day of 124 May, 1838; in September, 1838, we commenced sending them away upon an order; we had an order for about one hundred tons; the order was not completed until the next year; the spikes were for the Baltimore and Ohio railroad; the short bender was attached to the pointer; it got its motion from the shaft; both levers perform the same work; it is the long lever that is described in the specification; I was at the defendants' factory in August, 1841, and saw them using the long lever f. 222) in making hook-headed spikes; it was worked by a cam; the plaintiff and Marcus Hogle were there with me.

Upon his cross examination the said witness testified as follows:

In the machine used in 1836, the header bends the spike rod to make the hook-head; we had no further orders for hook-headed spikes after November, 1836, until the new machine was built, which was in the f. 223) spring of 1838; the spikes we made in 1836 were made for the Long Island railroad; we commenced making hook-headed spikes on the new machine in May or June, 1838; we then used the short lever attached to the pointer; we continued to use this until the 125 spring of 1839; we next put on a side bender, which we used in the summer or fall of 1839; the long lever was first put on the plaintiff's machine in the summer of 1840; this was worked by a cam. I attended a trial in this place between the Troy Iron and Nail Factory and f. 224) the defendants in this suit, in October, 1839; I saw a model of the defendants' spike machine exhibited at that trial; it had the long lever upon it, aad operated in the same manner as that put upon the plaintiff's machine in 1840. I was in the defendants' factory in Au-

gust, 1841; I think the machine I saw there was like the defendants' model; the bender was moved by a cam upon the main shaft; the long f. 225) lever works the easiest; we have made most spikes with the long lever; it makes no imperfect spikes; the short lever does make some imperfect spikes; the short lever has not been used in plaintiff's factory since the long lever was first upon the machine.

Lewis De Selle was then called as a witness for the plaintiff, who testified as follows:

I work at the plaintiff's factory. In 1841 I worked at the defendants', factory; I was at work there when the plaintiff and Mr. Hogle 126 came there in August, 1841; we then had an order for twenty-five or twenty-six tons of hook-headed spikes, and had them all made except f. 226) ten or fifteen hundred pounds; these spikes were made with the same kind of bender used by the plaintiff. I worked at the defendants' factory from the 15th day of June, 1838, until the summer of 1842; we went to making hook-headed spikes about a year after I went there. The defendants put their cast iron bender on their machine in July, f. 227) 1839; I carried the model to the furnace to get it cast. I carried it to Starbuck's furnace in Troy.

On his cross examination the witness further testified:

In January or February, 1839, Mr. Osgood commenced trying experiments to make hook-headed spikes; this was at the defendants' factory; he used a short wrought iron bender, which received its motion from the wheel.

Being further examined by the counsel for the plaintiff, the witness testified as follows:

Mr. Thomas Osgood took one of the common spike machines 127 f. 228) and put on the apparatus for making hook-headed spikes; he worked at it until he got tired of it; he worked at it two months or more; Israel Blanchard next worked at it; he also tried experiments; his spikes were imperfect; he worked nearly a month, and said he could not make it, that hook-headed spikes could not be made on those machines. William Iler then tried; I can't tell how long he worked at it. The defendants had an order for about half a ton of hook-headed spikes that spring, which Iler made out to finish; Francis Carror finished them over. The machine did not make the heads as smooth as they f. 229) wanted; Carror made a heading tool to finish them; this apparatus for making the hook-headed spikes was laid aside, and they again made common spikes on that machine; after this Mr. Osgood went to work again to try to make hook-headed spikes upon the same machine. After working at it a few days, he went to the carpenter shop and made a wooden model, the same model that I took to the furnace; Mr. 128 Winslow was present, I think. The apparatus which had been used by Osgood, and Iler, and Blanchard, was all taken off the machines f. 230) and not used again; after the model was finished Mr. Osgood asked me if it looked any thing like plaintiff's machinery? and I answered yes.

Being further cross examined the witness further testified, as follows:

Thomas Osgood and Mr. Winslow were present when Osgood asked me whether the lever looked any thing like the plaintiff's machinery. I had never worked for the plaintiff before that; I was often in his factory, and boarded with one of the men that worked there; I have worked for the plaintiff since July, 1842.

The counsel for the plaintiff then offered to read in evidence a letter purporting to be written by J. W. Hand to the plaintiff, which letter f. 231) the defendants' counsel admitted to be in the handwriting of J. W. Hand, who, at the date thereof, was chief clerk of the Patent Office, and is in the words and figures following: 129

PATENT OFFICE, *June* 1, 1839.

SIR: The specification and drawing of your machine for making railroad spikes and nails are herewith returned for amendment. The specification only names the parts, and refers to the drawings instead of describing their construction, combination, and operation; some of the f. 232) parts are not clearly represented in the drawings.

The claim should be a mere summary of the description, instead of describing the operation of the machine; some of the defects have been noted on the margin.

This office cannot decide upon the merits of your invention until the papers have been amended. Do not omit to make oath anew to the amended specification.

Yours, respectfully, 130

J. W. HAND.

Mr. HENRY BURDEN,
Troy, Rensselaer county, N. Y.

To which evidence the counsel for the defendants objected, and the said circuit judge then and there decided that the said letter was admis- f. 233) sible in evidence, to which decision the said counsel for the defendant then and there excepted.

The counsel for the plaintiff then offered in evidence five several letters, purporting to have been written by Henry L. Ellsworth to the said plaintiff; which said letters the defendants' counsel admitted were in the handwriting of the said Henry L. Ellsworth, then and still the commissioner of patents; but the counsel for the defendants then and there objected to the admissibility of evidence to prove the hand- f. 234) writing of said letter, and also to the competency of said letter 131 as evidence in the cause; which said letters are in the words and figures following:

PATENT OFFICE, *June* 13*th*, 1839.

SIR: Application has been made for a patent for a spike-making machine, which is believed to interfere in some particulars with your application; and to enable this office to decide the point of difference, you are requested to transmit the papers which were returned to you for amendment on the first inst. to this office by the first Monday in July

next, as on that day the claims in the application, referred to above, will be decided.

Yours, respectfully,

H. L. ELLSWORTH.

f. 235) Mr. HENRY BURDEN,
Troy, Rensselaer co., N. Y.

PATENT OFFICE, WASHINGTON, *22d July*, 1839.

SIR: You are hereby notified that the claims made by you in 132, your application for a patent for nail and spike machines has been adjudged to interfere with two applications; one filed by John McCrane, of Baltimore, Md., and the other by Richard Savary, of North Fairhaven, Bristol county, Mass., who have been notified thereof; a hearing will be granted to the parties on the second Monday of October next, in con-
f. 236) formity with the provisions of the 8th section of the act of July 4th, 1836. The testimony must be in writing, under the oath or affirmation of persons who are not interested in the question at issue; the main thing to be proved is the date of the invention made by you, and the nature and extent of the invention should be particularized.

Yours, respectfully,

H. L. ELLSWORTH.

Mr. HENRY BURDEN,
Troy, Rensselaer co., N. Y.

P. S. The evidence to be taken and transmitted in conformity to the enclosed rule.

H. L. E. 134

PATENT OFFICE, *October* 15, 1839.

f. 237) SIR: You are hereby notified that the hearing appointed by this office to take place on the second Monday inst., in the case of interfering applications for a patent between yourself and John McCrane and Richard Savary, has been postponed to the first Monday in December next.

The evidence which you have transmitted cannot be used, as it was not sealed up and transmitted to the Commissioner of Patents by the person before whom it was taken in conformity with the fifth rule. The evidence is herewith returned that the rule may be complied with. The day of hearing has been extended at the request of Mr. John
f. 238) McCrane; the notice for the hearing not having been received by him.

Yours, respectfully,

H. L. ELLSWORTH.

Mr. HENRY BURDEN,
Troy, Rensselaer co., N. Y.

PATENT OFFICE, *December* 17, 1839. 135

SIR: In the case of three interfering applications for patents for im-

proved machinery for making brad-headed spikes or nails between yourself, and John McCrane, and Richard Savary, the priority of invention for the mode of bending the iron preparatory to making the head, which was the only point of interference, has been decided in your favor. Should there not be an appeal taken from this decision on or before the f. 239) second Monday of January, 1840, a patent will be granted to you.

The evidence is now open to the examination of parties. In compliance with your request, your specification and drawings are herewith returned.

Yours, respectfully,

H. L. ELLSWORTH.

Mr. HENRY BURDEN,
Troy, Rensselaer co., N. Y.

PATENT OFFICE, *March* 19, 1840.

SIR: The specifications of, and drawings of, your spike machinery are herewith again returned for amendment. The instructions con- 136 tained in the letter from this office to you of the 19th of February last have not been complied with.

Yours, respectfully,

H. L. ELLSWORTH.

f. 240) Mr. HENRY BURDEN,
Troy, Rensselaer co., N. Y.

To which evidence the counsel for the defendants objected, and the said circuit judge thereupon decided that the said last mentioned letters were admissible and might be read in evidence; to which decision the counsel for the defendants then and there excepted.

The counsel for the plaintiff then offered in evidence an exemplification from the Patent Office of a paper purporting to be a letter from the defendant, John F. Winslow, to Henry L. Ellsworth, which paper is in the words and figures following:

TROY, *October* 19, 1839.

f. 241) H. L. ELLSWORTH: 137

SIR: I am informed that Henry Burden, of this city, has recently applied for letters patent for an improvement in heading spikes and bending the iron preparatory to making the head of the hook spike or brad-head spike; my information upon this subject is so very recent that I have not had time to act in the matter, but request that you will, for a few days, withhold issuing a patent, as on Monday next I will have the necessary affidavits made and sent to you, to the effect that we used the very same thing, for which he now asks a patent, nearly four years ago f. 242) in our spike factory, for the purpose of making the hook-headed spikes, but did not patent it, because we considered it too common an instrument, and one that every person was entitled to use.

J. F. WINSLOW,
Agent of the Albany Iron and Nail Works.

And the counsel for the defendants then and there objected to the evidence, and the circuit judge then and there decided that the 138 same was admissible, and allowed the counsel for the plaintiff to read the same in evidence; to which decision of the said circuit judge the counsel for the defendants did then and there except.

f. 243) The counsel for the plaintiff then rested, and the counsel for the defendants, to maintain and prove the issue aforesaid on the part and behalf of said defendants, called as a witness on the part of said defendants—

William Iler, who, having been duly sworn, testifies as follows: I am employed at the defendants' factory; I have been acquainted with the machinery for making hook-headed spikes since the year 1835; they first tried the experiments in making hook-headed spikes at the defendants' factory in the spring of that year; the experiment were tried upon f. 244) a machine like that represented by the model produced in court by the defendants; the last experiment they tried was to use a bending lever moved by a cam attached to a shaft in the same way the bending lever is now used; from 1835 to 1839 the bending lever remained of the same form; it might have been varied a little in shape, but the 139 principle of it was the same; the bending lever used in 1835, and that used in 1839, produced the same effect in the same way; both were moved upon a centre, and both were moved by a cam. In 1839, about f. 245) ten tons of hook-headed spikes were made by the defendants; the spikes we made were imperfect, but the defect was in the cutting off the rod and not in the bending of the head; the defect of the first bending lever we used was that, being made of wrought iron, it would spring; the cast iron bender was put in to make it stiffer; there was no other difference between the wrought iron bender used in 1835 and the cast iron bender used in 1839.

f. 246) Upon his cross examination the witness testifies as follows: I went to the defendants' factory to work in the fall of 1834 or spring of 1835; I had been there but a short time when the spikes were made; I am twenty-six years old now; I fed a spike machine when I first went 140 there; I was kept at feeding spike machines until I was able to run one myself; all the repairing of the machines was done in the shop; when I first saw the bending lever it was on the machine; I don't know who made the first lever; this was in the spring of 1835; I remember f. 247) it because, in the fall of that year, we sent the machine on which it had been used to Pittsburg; the lever that we used in 1835 has been made a little shorter since; I think both the Mr. Osgoods used it, but am not certain; I have no recollection who made it; I saw an awkward-looking spike coming down the spout of the machine, and I went and examined it; I had never seen one before; it was in the same room where I worked; I have not conversed with any one about the machine since; I know Louis De Selle; I saw him in the factory in f. 248) 1839; Mr. Osgood was making hook-headed spikes; the difficulty in making them was in cutting off the point; Blanchard gave it up as a bad job.

Thomas Osgood was then called as a witness for the defendants, 141 who testifies as follows: I reside in Troy; I am employed in the defendants' spike factory; I first became acquainted with the bending f. 249) lever in 1835; I can't say what time in that year; I first saw it used in the defendants' factory; it was constructed like that now exhibited here; it did not differ in principle from that used by the plaintiff; it was moved by a bolt in the cam wheel on the driving shaft; I made hook-headed spikes upon the machine with the bending lever in 1835; we made some spikes at that time to put on sample cards; there is no difference in principle between the lever used in 1835 and that now used by the defendants; in 1837 the defendants offered to make a f. 250) quantity of hook-headed spikes for the Nashua and Lowell railroad, and samples were sent for that purpose by James Horner. A large quantity was made for the Little Schuylkill and Susquehanna railroad; we commenced making them in February, 1839, and completed the order the last of July or first of August the same year; I made the model from which the cast iron lever was cast in April, 1839; a lever was cast in February, 1839, but I do recollect f. 251) whether a cast iron lever was put upon the machine at that 142 time or not; it was put on in July, 1839; the cast iron lever was put on because it was harder and stiffer; there was no spring to it; I know Louis De Selle; I never asked him whether my pattern looked anything like Burden's machinery; I did not ask him anything about Burden's machinery at the time we were about putting on the bending lever or getting the pattern made for it.

f. 252) Being cross examined, the witness further testified as follows: I have been employed in the defendant's factory since 1836; I never said to any one that I could not get along making hook-headed spikes without taking Burden's bender; my business is taking care of the machine and doing other work about the factory; I have worked in a pattern shop, but my business is spike making; I make my own patterns; I worked in the plaintiff's factory in 1824 and part of 1825; I then run a cut nail machine; I made the first ship spikes that was made in the defendants' factory; John Miller and Edward Chambers made the bending lever in 1835; I cannot say that I saw them 143 f. 253) make it; John Miller now resides on Green island, opposite the city of Troy; Chambers resides in Troy; I have lately conversed with him about the bending lever; they did the forging for the factory; I don't know who made the pattern or who gave them the plan.

Edward Chambers, being called and sworn as a witness for the defendants, testified as follows: I am a blacksmith, and live in Troy; I f. 254) have been employed in the defendants' factory since April, 1835; I recollect making a wrought iron bending lever for a spike machine by the direction of William Osgood; it was between April and the last of July, 1835.

Being cross examined, the witness further testified as follows: I know the time when the bending lever was made very well, for it was the first year I went there; Mr. Turner was then the agent; he is now

dead; Mr. Osgood gave me a kind of pattern, partly in chalk and partly in nail rod; I did not see the bender at work, but saw it on the 144 f. 255) machine; it was then called a lever for bending spike rods; I did not know what it was for until I saw it on the machine.

Joshua H. Butterworth, being called and sworn as a witness for the defendants, testified as follows: I live in Morris county, State of New Jersey, and am engaged in spike making, and have been so engaged twelve or thirteen years; I have made a machine for making hook- f. 256) headed spikes; I finished my machine in 1841; I made experiments in 1837; in that year I bent the head with a bending lever; it was hung in the centre, and was operated by another lever attached to the driving shaft; I have seen the bending process used by the defendants; the principle is the same as that of the bending lever I used in 1837; my bending lever was made of wrought iron; the one in defendants' mill is, in all respects, like mine; I would describe both in the same way; I made hook-headed spikes upon my machine in 1837; some of them were sent to New York as samples. 145
f. 257) The defendants then rested, and the plaintiff called as a witness—

Ebenezer Hunt, who being sworn testified as follows: I have been engaged twelve or fifteen years in making spikes and constructing and finishing spike machines; I commenced work for the defendants in the fall of 1833, and continued with them until the fore part of April, 1836; the first work I did was to build a small model for a machine to make small boat spikes and nails; about six months afterwards, I made an f. 258) improvement on the model, and made one similar to that now produced by defendants; there was no bending lever about it at that time; I finished it in the spring of 1834, and made ship spikes upon it. William Osgood and myself were in partnership in the invention of the machine; we built the machine between us as an invention; after this, Osgood and myself formed a copartnership with Corning & Co. in the spike business; we built three other machines in 1834 and 1835; Osgood was foreman; I was considered the principal operator as a 146 f. 259) workman during the time I was there; there was no hook-headed spikes made to my knowledge; I saw no apparatus while there for making hook-headed spikes; I was at work the whole time in the room where the machines were; I never saw anything like the bending lever while I was there; Thomas Osgood was considered to be our carpenter, and made our models and patterns, and such other things as we directed; the remainder of the time he worked with me in drilling and fitting machines; I continued to visit the defendants' factory and spike room f. 260) frequently through the summer of 1836; in May, 1836, I returned, and worked about a week in the factory in finishing up the last machine; in my visit there that summer I saw no bending apparatus; a bending apparatus could not have been put on one of the machines in the day time while I was there without my knowing it.

Being cross examined, the witness testified as follows: In the summer of 1835 I was cutting spikes pretty much all the time; I kept the

machine in order and fed it; I likewise kept another machine in 147
f. 261) order for William Iler; it was my constant employment in
1835 to make spikes and see to the machines; the defendants were run-
ning then sometimes three and sometimes four machines; they were all
in one room; the last machine was not completed until 1836; it was
built by Peter C. Marble; the four first machines were finished in
1835, near the end of the year, I think; I worked on them until they
were done; I should think I worked at the two last machines a quarter
or a third of the time; they were built in the same room in which the
f. 262) machines run; Thomas Osgood run one machine; I ran one
and took charge of Iler's; and Blanchard run another; I paid no par-
ticular attention to Osgood's machine; I was not absent more than half
a day at a time during the summer of 1835; if Osgood had put such a
thing as the bending lever on his machine that summer, and it had re-
mained there twenty-four hours, I should have been sure to see it; I
think there could not have been any hook-headed spikes made there with-
out my knowing it; I work for the plaintiff now, and have done so 148
f. 263) since May, 1838; I was asked by the plaintiff if I had known
any thing about the apparatus for making hook-headed spikes while I
was at the defendants' factory; I think this was in the spring of 1839;
the plaintiff told me that he had heard that the defendants were making
hook-headed spikes.

William W. Bowens, a witness called and sworn for the plaintiff,
testified as follows: I have been working in New Jersey; I have worked
at spike making in the defendants' factory; I went there in 1835; I left
f. 264) the spike factory in the summer of 1837; I saw no hook-headed
spikes made there while I was there; I saw no apparatus on the ma-
chine for making them; I returned to the defendants' factory on the 8th
of July, 1839; I then saw some imperfect hook-headed spikes; Peter
C. Marble was putting a cast iron bender upon one of the spike ma-
chines; I went to work upon a rivet machine in the spike factory; I saw
the bender in operation; I had not seen one before; I saw some appa-
ratus hanging up on the side of the room which was calculated for mak-
f. 265) ing hook-headed spikes; I saw this when I went there in July;
I boarded with Thomas Osgood in 1836 or 1837; in one of those 149
years I had a conversation with him, in which he showed me a wooden
spike with ribs to it; I asked him if he was going to try to make it?
He said he had enough to do without making that, that he would give
that to Burden to make, or something to that effect.

Being cross examined by the counsel for the defendants, the witness
testified as follows: I worked in the spike factory in the latter part of
1835, or the fore part of 1836; I then coopered kegs and ground the
f. 266) points of spikes, and packed some; my next business was in
the rolling mill; I returned to the spike factory in the fall of 1836; my
business was clearing up about the factory, and cutting ice in the dam;
not long after this I went to feeding a machine for Thomas Osgood; it
was before the summer of 1836 that I went with Osgood; I continued
with him six months, and after that I run the machine myself; this was

f. 267) after Ebenezer Hunt had left the factory; I believe it was 150 in 1837 that I began to run the machine myself; it was the fore part of the season; I run the machine until the panic of 1837; I heard of no hook-headed spikes being made at the Albany factory in 1835; I don't know that I should have known it if Mr. Osgood had put a bender f. 268) upon his machine; I knew nothing about the spike machines then; if any hook-headed spikes had been made I think I should have seen them; I don't remember how the machinery which I saw hanging there looked; it looked as if they had been trying to make hook-headed spikes.

John Miller, being called and sworn as a witness for the plaintiff, testified as follows: I am a blacksmith; I went to work for the defendants at their factory in January, 1813, and continued until September, 1836; Edward Chambers worked with me in the blacksmith shop in 1835; I had charge of the shop as foreman; Chambers was a helper; I f. 269) never saw a hook-headed spike made at the defendants' factory while I was there; I have no knowledge that any machinery for making hook-headed spikes was forged while I was there; I never forged 151 a lever for that purpose myself; I do not recollect that any instrument resembling the bending lever attached to the models now exhibited was ever forged in the shop while I was there; I do not recollect that Thomas Osgood marked out a pattern of such a thing for me to make; I should think if it had been explained to me what such a thing was for f. 270) I should have remembered making it.

Being cross examined by the counsel for the defendants, the witness further testified as follows: It was my business, when the model of any thing required was brought to the shop, to forge it; I would make whatever was wanted without inquiry what it was for; I cannot recollect a quarter of the pieces of machinery I forged while there; they were often trying experiments, and getting pieces of machinery made which they did not explain to me; I did not often go into the spike factory; f. 271) the blacksmith shop and the spike factory were twenty or thirty rods apart; I seldom went to the factory except when I was wanted 152 there.

David B. Jewett, being called and sworn as a witness for the plaintiff, testified as follows: I reside in West Troy; I was formerly agent of the West Troy Butt factory; was such agent in summer of 1839; I was at the defendants' factory the last of June or first of July in that year; saw Mr. Winslow, one of the defendants, there, who told me he had f. 272) just perfected a machine for making hook-headed spikes; he said that a young man who was then at work on the machine had perfected some improvements since February or March previous; I understood from him that he had perfected some improvements which were important to him; that it was an improvement in the machinery for making hook-headed spikes; I think the young man who was at work on the machine was William Iler; I went from the defendants' factory f. 273) to the plaintiff's; the plaintiff showed me a machine which he said was for making hook-headed spikes; I did not examine either of

the machines; I think I told the plaintiff that Winslow was ahead of him; that he had shown me a machine for making hook-headed 153 spikes.

Hiram Harrison, a witness called and sworn for the plaintiff, testified as follows: I have been employed in the defendants' factory sixteen or seventeen years; my principal employment has been making cut nails; f. 274) I was frequently in the spike room during the years 1835 and 1836; I first went to work in the spike factory in March or April, 1839; the first I ever saw or heard of any hook-headed spikes being made at defendants' factory was in the spring of 1839; I did not then work at making them, but others did; when I first went in there I saw Thomas Osgood and Hubbard Hicks at work fitting up a machine to make hook-headed spikes upon it; it was not in full operation at the time I went into the factory; they were fitting the apparatus to one of the machines which had been used for making common spikes; they made a few spikes on it at the time; they used the wrought iron bender a f. 275) while, and then got it cast; but the principle of both was the same; the wrought iron bender was laid aside and the cast iron one substituted; Blanchard and Iler worked on the machine at different 154 times; the cast iron bender was, I believe, put upon a new machine which was built in the spring of 1839; the casting was a little heavier; the machine upon which the wrought iron bender was used was afterwards fitted up for a common spike machine; I think there was some little interval between the time they used the wrought iron f. 276) bender and the time they applied the cast iron bender; the cast iron bender was applied the last of June or first of July, 1839; some of the spikes made with the wrought iron bender were good, but the machine was not so strong as that upon which the cast iron bender was put.

Being cross examined, the witness further testified as follows: The nail factory and the spike factory of the defendants are in separate buildings; it was no part of my business to ascertain what was done in f. 277) the spike factory before I went there; the machines upon which the cast iron bender and the wrought iron bender were used were alike, except that the casting of one was heavier than that of the other; there is no material difference between any of the spike machines in the 155 factory, except in the strength; I know of no reason why the cast iron bender was substituted for the wrought iron bender, except that it made it stronger.

Charles H. Miller, being called and sworn as a witness for the plaintiff, testified as follows: I was employed at the defendants' factory from f. 278) 1829 to 1839; in the spring of 1831, I went to work on a nail machine, and continued until 1833; I then went into the blacksmith shop as an apprentice; in the spring of 1835, Mr. Turner, the agent, took me into the store, where I continued until the fall of that year, when I returned to the blacksmith shop and continued there until the spring of 1836; in July, 1836, I went to work in the nail factory; in the winter of 1837, I went again into the blacksmith shop, and continued

f. 279) until October; I then went to Michigan, and upon my return in November I went to work in the blacksmith shop or the nail fac- 156 tory; I first knew of hook-headed spikes being made in the defendants' factory in 1839; they were made with a wrought iron bender; I had never heard until that time of hook-headed spikes being made any where; the first time I saw the bender it received its motion from the gripping lever or gripping wedge; the bending lever was attached either to the gripping lever or the wedge; after that I saw it with a cam motion on the balance wheel; I left the factory on the 11th day of June, 1839, f. 280) and went to Montreal; I returned the latter part of July; they then had on the cast iron lever; the defendants' model produced in court is a perfect model of that they then used.

Being cross examined by the counsel for the defendants, the witness further testified as follows: I first saw the bending lever applied to the spike machine in February or early in the spring of 1839; some time in the same spring I saw the motion given to the lever by the cam wheel; at that time I used to pass through the factory frequently; I did f. 281) not examine the machine particularly; it was a new thing to me, and I took more notice of it than I otherwise should have done; my business did not require me to examine the spikes that were 157 made there; the cam when I first saw it applied to the wheel was on the rim of the wheel; I am twenty-six years old.

William Gibson, being recalled by the plaintiff, testified as follows: the profits upon hook-headed spikes are from two and a quarter to two and a half cents per pound; this is the clear profit after deducting the f. 282) whole expense of manufacturing.

Upon his cross examination the witness further testified, that the spikes are sold for five cents and three-quarters per pound; the pig iron cost thirty dollars per ton; it cost fifty dollars per ton to convert it into nail rods; the kegs and packing cost four dollars per ton, and the manufacturing two dollars and fifty cents per ton.

The counsel for the plaintiff then offered in evidence an exemplifi- f. 283) cation from the Patent Office of a certain affidavit purporting to have been made by Israel Blanchard, William Iler, and Thomas Osgood, which affidavit is in the words and figures following: 158

STATE OF NEW YORK, *Rensselaer county, ss.*

Israel Blanchard, William Iler, and Thomas Osgood, all of the city of Troy, county of Rensselaer, and State of New York, being duly sworn, doth depose and say, each for himself says, that he has for more than three years last past been acquainted with the use and application of machinery used in the manufacturing of hook-headed wrought iron spikes and nails; that the principal of the machinery for bending the rod, preparatory to heading the nail or spike, is applied in manner following, to wit: a bar or lever of iron is made about four feet long, f. 284) with a lateral hole through it about eighteen inches from one end, through which hole a bolt is inserted, by which said lever is attached to the post which supports one end of the journal of the top

lever in the machine patented by William Osgood and Ebenezer Hunt, of the said city of Troy, on the 14th March, A. D. 1834; to the short arm or end of first mentioned bar or lever nearest the fulcrum is attached a square piece or rod of iron, called a bender, about eight 159 inches in length, and about one inch in diameter at the upper end, and tapering to a point, extending down diagonally in a line, and nearly at right angles with the end of the rod intended to be bent; said lever is f. 285) moved by cams, on the side of a cam wheel, which striking successively under the end of the long arm of said lever, by which said long arm of the lever is raised perpendicularly about the space of three inches, and may be thrown back by means of springs or weights; and to said machine are also attached what are called outside dies, one fixed and the other movable, so placed as to prevent the stock or rod from f. 286) which the said nail or spike is made from spreading laterally in the act of heading; and the said deponents further say, and each for himself says, that the above described machine, or improved part of machine, for manufacturing hook-headed spikes, is precisely the same in principle as that made and used by Henry Burden, at the Troy Iron and Nail works, in the said city of Troy. And the said deponents further say, and each for himself says, that the said principle, or im- 160 provement, has not within their knowledge, or belief of deponents, or f. 287) either of them, been claimed as, or supposed to be, a new invention, but is a simple application of a principle well known and in common use, from and since the month of March, A. D. 1836. And further these deponents say not.

Signed, WILLIAM ILER,
THOMAS OSGOOD,
ISRAEL his ✕ mark. BLANCHARD.

Sworn before me, this 21st day of Oct., 1839.
C. D. SHELDON, *Com'r, &c.*

And the counsel for the defendants then and there objected to the reading of the said affidavit in evidence; but the said circuit judge then f. 288) and there decided that the same was admissible, and the said counsel for the defendants then and there excepted to the said decision of the said circuit judge. 161

The plaintiff having rested, the defendants called—

William Osgood, who, having been sworn, testified as follows: I reside in Amesbury, Massachusetts; have resided there since June, 1838. Before that I was superintendent of the defendants' spike factory. In 1835, Mr. Horner, one of the defendants, sent me a pattern of a spike, and wanted to know if I could make it; it was a hook-headed spike, with ribs at each corner of the shaft. I told him I could make the hook-heads, but I thought it would be difficult to make the ribs. I f. 289) made hook-headed spikes in the winter of 1836; I began trying experiments in November, 1836, and [in] December of that year I

3726.

put on the wrought iron lever and made hook-headed spikes with it; there was no difference between the wrought iron lever which I then used and the cast iron bender which is now used; I made at that time some hook-headed spikes, and put them on sample cards and sent them off that winter. The hook-heads were made entirely by machinery; I f. 290) made a few more in 1837; in the summer of that year, Mr. Horner took some to the Nashua railroad to show, intending to get 162 an order for them.

Upon his cross examination by the counsel for the plaintiff, the witness further testified as follows: I was not often in the plaintiff's factory; I do not recollect of hearing that the plaintiff made hook-headed spikes in 1836 or 1837; I had seen hook-headed spikes said to have been made on plaintiff's old machine; I never saw the contrivance by which he bends the heads; I do not recollect going into the blacksmith f. 291) shop and drawing a plan of the lever; I ordered one made by the workman of the spike factory, who was Thomas Osgood, I think; I told him it would be best to try a lever on the shaft and get the motion from a cam wheel; that was the first idea I had of a bending lever; it was in November or December, 1836; I do not recollect giving directions to the blacksmith to make it; I recollect that Thomas Osgood and myself consulted together about it, and we had a lever made in the manner I have described. 163

Being further examined by the counsel for the defendants, the wit- f. 292) ness further testified as follows: I devised the bending lever; I had never seen or heard of one before; I put a pin in the cam wheel to give the bender motion; it moved upon a point like the model in court; it had a joint for the head like this; it was in all respects like the bender now used by the defendants.

f. 293) Isreal Blanchard was then called as a witness for the defendants, who having been sworn testified as follows: I am employed in the defendants' spike factory; I commenced there in the spring of 1835; I recollect that a machine was made there for making hook-headed spikes; according to my best recollection, it was in the fall of 1835; it might have been in the spring of 1836; hood-headed spikes were made upon the machine; they were made with a lever like that now shown here; the only difficulty about it was, that it did not always bend 164 the spike right; we made one or two hundred spikes with it at that f. 294) time; I did not make any the next year; I was not there; in 1838, Thomas Osgood commenced making experiments for the purpose of making the bender stronger; the cast iron bender was put on in the spring of 1839; it does not differ at all from the wrought iron bender used before; it does the same work upon the same principle; the cast iron bender is stronger; it does not give at all; we made some hook-headed spikes with the wrought iron bender in 1838; I made some twelve or fifteen hundred pounds with it towards spring that year. f. 295) Being cross examined by the counsel for the plaintiff, the witness further testified as follows: I finished off the spikes myself; I could not bend the heads perfectly with the wrought iron bender; I

finished some with the hammer and some by grinding; I put on the bending lever the first time in 1835; I think I went away from the factory in June, 1837, and returned in January, 1838; Iler made experiments with the machine after I did; in the winter or spring of 165 1838, Mr. Winslow told me if I would go on and make the spikes for an order he had, he would give me a new coat; I know that the ma- f. 296) chine was worked some time with a wrought iron bender; the cast iron lever was put on early in 1839; it was a year before the cast iron lever was put on that Winslow told me if I could go on and fill the order he would give me a new coat; I worked at it about ten days, and gave it up because I was sick; I also worked at it a few days in f. 297) 1839, shortly before the cast iron bender was put on; Osgood was taken sick and wanted me to go on with the work; Iler made an alteration to help the lever, because it was not strong enough; the spikes that were made just before the cast iron bender was put on were good spikes; the spikes shown here were made with the wrought iron bender before the cast iron bender was put on.

Philander Tracy, being called and sworn as a witness for the defen- f. 298) dants, testified as follows: I am employed at the defendants' factory; I went there the latter part of August, 1837; a day or two after I went there, William Iler showed me a hook-headed spike, 166 and told me it was made in the defendants' factory; this was just before I commenced working for the plaintiff.

Upon his cross examination the witness further testified as follows: The defendants' factory was in operation at the time I was there in 1837; I was there as often as once or twice a week until I went into the plaintiff's employ; I remained with the plaintiff about a year, and then went into the defendants' employ, where I have remained ever f. 299) since, with the exception of about seven weeks.

Thomas Osgood, being recalled and examined by the counsel for the defendants, further testified as follows: The defendants' factory was running part of the time during the summer of 1837; a part of the hands were discharged and a part retained; the first demand for hook-headed spikes was in the winter of 1838; the defendants' first order for any considerable amount was for the Schuylkill railroad; it was re- f. 300) ceived on the twenty-first day of January, 1839; before that 167 time I never heard of any considerable demand for the article; since that the demand has considerably increased; the hook-headed spike is use for the T rail.

The counsel for the defendants also read in evidence a deposition of Hubbard Hicks, taken before the honorable John Q. Wilson, a judge of the Albany county courts, on the third day of September, 1842; which deposition is in the words and figures following, that is to say:

"I reside at the Albany iron works, in the city of Troy, and county f. 301) of Rensselaer; I am a blacksmith by profession; I have been employed at the Albany iron works for the last eight years, with the exception of one year; my business there was blacksmithing; I am acquainted with the machines employed there for the purpose of manu-

facturing spikes; they are manufactured at that place, what are called hook-headed spikes; the instrument by which the spike rod is bent before it is headed is called the bending lever; the bending lever consists of a bar of iron with a hole in it; or being on a pivot, to the one end of
f. 302) this bar the bender is attached, and the other end of the 168 bar is moved by a cam, applied either by revolving or by a slide; the one that is used is the revolving cam, and all the machines of that character are of the same construction; as the cam revolves it strikes the end of the rod, raises it up, and produces a corresponding downward motion to the bender; when it comes down the rod is thereby bent; this process for bending has been in use from 1835 to the present year, to the best of my knowledge, in the Albany iron works, for mak-
f. 303) ing hook-headed spikes; I have seen the bending machine above described in use in the Albany iron works for the first time four years ago, and it has been in use there more or less ever since; I first made one myself three or four years ago, of wrought iron, and it was used there until the cast iron was substituted; I worked at the Albany iron works in 1836, at the time of the great fire in New York, about
f. 304) which time the machine for making hook-headed spikes was removed, as I understood, to Pittsburgh; I left the Albany iron works in May, 1837, and returned the next spring, and have been there 169 ever since; I think I saw hook-headed spikes that were made by the use of a bender at the said works as early as 1835; they were made by way of experiment, to see if they could be thus made; I saw the spikes after they were made; the hook-headed spikes were not at that time in so much demand as the other kinds of spikes were.

f. 305) "On being cross examined, the said witness said: The machines I first saw four years since were moved by the same motion as they now are; all I knew about these machines before the time I saw them, as I have before testified, I got from the inventor, William Osgood; the first time I saw the bending machines in operation, of which I have spoken, was about four years ago; I saw the spikes after they were made, as early as 1835; although I did not then see the bending
f. 306) machine in operation, and never saw the said machine until four years ago, as I have before testified; the cams that are used for the purpose of moving the bending lever are moved on a wheel, 170 and is a revolving motion.

"And being further examined on the part of the defendants, the witness said: When I returned in the spring of 1838, I made one of these bending levers of wrought iron; and within three months after my return, which was in the month of April, I made the lever by the
f. 307) direction of the person who ordered me to do it: he was the overseer or manager of the spike factory, Thomas Osgood; the Albany nail works are owned by the defendants, and Mr. Winslow is engaged in them, having the more immediate direction thereof."

The counsel for the defendants also read in evidence a deposition of Richard Savery, taken on the twenty-second day of September, 1842, before the honorable Thomas Irwin, district judge of the United States

district court, for the western district of Pennsylvania; which deposition is in the words and figures following, that is to say:

f. 308) "I am acquainted with the parties in this suit, and also with the subject-matter in controversy between them; the facts, as I 171 know them, are these: I started a small spike machine of my own invention in 1838, which I commenced to build in 1835. The first hook or brad-headed spike I ever saw was early in the spring of 1838; it was brought from Wheeling, Virginia; I thought nothing of it until August following, when a young man named Williams gave me one, asking me at the same time if I could make them on my machine. I imme-

f. 309) diately saw that, by a very trifling alteration, I could make them on my machine, by inserting a bending lever at an angle of 22½ degrees, operated by a wedge which received its motion from a cam on the cam shaft, which would bend the iron of which the spike is made preparatory to the heading the same. The same day I communicated the plan to Mr. Henry A. Lavake, showing him the way to apply it on my machine, &c.; in September following I went to Massa- 172 chusetts, and in October I was in Boston, where I saw Horace Gray, and contracted with him to build a spike machine, but nothing was

f. 310) said concerning hook or brad-headed spikes then; I returned to Pittsburgh, settled my business, and returned to Massachusetts in December, 1838; I went to Boston in January, 1839, at which time Mr. Gray asked if I could make hook or brad-headed spikes upon it; I told him I thought I could; he replied that if I could he would allow me a fair compensation, &c. I completed my patterns in the town of Fairhaven, Bristol county; took them to Boston in February the same year;

f. 311) I then for the first time saw Mr. Ralph Crooks, agent for the Boston Iron Company; we conversed on the principles of my machine, (he had not seen it or the patterns,) and asked me if I thought I could make the hook-headed, &c.; he then said that he had often thought of a plan that would, as he thought, do it, and said he believed it would work well, providing my machine was so constructed as to admit of it, &c.; he then drew on paper the same thing as I had adopted, 173 saying that he had often thought of adopting it himself. I started their machine in May following, and in June I went to Washington, D. C.

f. 312) Having business in Baltimore, I there ascertained that Henry Burden, of Troy, N. Y., and one McCrane, of Baltimore, Md., had filed a caveat for a patent for the same thing; this was the first time I ever thought it patentable, and always had considered it public property, knowing that its application was as natural as for two knives to cut a nail. I then thought that my claim was as good as theirs, and filed a caveat accordingly. I in August went to Troy, in order to ascertain, if possible, whether their mode of operation for making the

f. 313) brad spikes was the same as mine the time they had adopted it; I found their principle exactly like my own; I told Mr. Burden I considered it common property; he replied in words to the amount that he did not care much in regard to me, but as for them, (speaking of the Albany Co.,) they should neither use that or the original, if there was

any virtue in law; I inferred from what he said then that I might make use of it unmolested by him. 174

"I found his principle like my own; and he claiming its adoption in
f. 314) 1836, I withdrew my claim as to priority, the more readily as Mr. Crooks had also suggested the same before seeing mine, or, as he said, ever hearing of it or Burden's, when Mr. Burden said he did not care much in regard to me, &c., &c. This is to certify, that I had no confidence in any promise he made me in relation to it; this is all I know in relation to this matter."

The plaintiff's counsel then gave in evidence the following certifi-
f. 315) cate, signed by Richard Savery, its execution being proved by William Gibson, viz:

"This is to certify, that I have no recollection of inventing the machinery for making hook-spikes prior to August, eighteen hundred and thirty-eight.

RICH'D SAVERY.

Troy, Sept. 13, 1839. 175

Witnesses—WILLIAM GIBSON,
MARCUS HOGLE."

To which evidence the counsel for the defendants objected, and the said circuit judge decided that the same was admissible; to which decision of the said circuit judge the said counsel for the defendants then and there excepted.

The counsel for the plaintiff then read in evidence the deposition of
f. 316) Hiram H. Chubbuck, taken before George T. Curtis, esquire, a commissioner to take depositions, &c., for the district of Massachusetts, on the seventeenth day of September, 1842; which deposition is in the words and figures following, that is to say:

"I, Hiram H. Chubbuck, of Boston, in the district of Massachusetts, on oath depose, that I was in the employ of the Boston Iron Company in the year 1839, when Richard Savery commenced putting up a machine for making the hook-headed spike used in railroads. The 176 machine was put up in the month of April, and put into operation in the month of May; and in that month there were 3,400 lbs. of spikes
f. 317) made on it by me in one job, and 2,600 lbs. the next job; from that time it continued to be operated with, and was introduced in perfect operation as a machine on the first of May for the first time."

The testimony having been closed, and the cause summed up to the jury by the counsel for the respective parties—

His honor, the circuit judge, charged the jury that the first question for them to decide, upon the evidence before them, was, whether the plaintiff was the first and original inventor of the improvement described in the specification annexed to his letters patent; and, if they should
f. 318) come to the conclusion that he was, then the next question for them to decide would be, whether the defendants had, prior to the application of the plaintiff for letters patent, constructed their machine for making hook-headed spikes; that, if said defendants had con- 177

structed their machine prior to such application, then they would have a right to use the specific machine so constructed by them, notwithstanding the letters patent subsequently issued to the plaintiff. But if the plaintiff made application for a patent before the defendants constructed their machine, then, if the defendants' machine was an infringement of the plaintiff's letters patent, the plaintiff was entitled to
f. 319) recover; that some evidence was furnished as to the time when the plaintiff made application for his patent by the deposition of Richard Savery, introduced by the defendants, and by the letters patent which have been produced by the plaintiff.

The jury, after they had retired, returned into court and inquired of the court the date of the first letter received by the plaintiff from Washington, and when the cast-iron bender was proved to have been put upon the defendants' machine. His honor, the circuit judge, then
f. 320) stated to the jury that the first letter received by the plain- 178
tiff from Washington was dated June 1, 1839, and that the cast-iron bender was proved to have been on defendants' machine on or about the eighth day of July, in the same year. The jury again retired, and soon returned into court with a verdict of seven hundred dollars for the plaintiff.

And inasmuch as the said several matters, so given and offered in evidence on the trial of the said cause, and the decisions of the said circuit judge during the trial thereof, and the exceptions to such deci-
f. 321) sions taken by the counsel for the defendants, do not appear by the record of the trial of the said cause, the counsel for the defendants then and there tendered to the said judge this bill of exceptions, to which he subscribed his name and affixed his seal.

But because the judges of the said court now here will advise what judgment to give of and upon the premises, a day is therefore given to the said parties that they be before the said judges, at the village of Canandaigua, on the twentieth day of June next, to hear their judg-
f. 322) ment of and concerning the premises, because the said 179
judges are not yet advised, &c.; at which day and place last mentioned, before the said judges, come the parties aforesaid, by their attorneys aforesaid, and all and singular the premises being seen, and by the court here fully understood, and mature deliberation being thereupon had, it seemeth to the said court now here, and they so decide, that the said verdict is good and valid in the law, the said bill of exceptions to the contrary thereof in anywise notwithstanding.

It is therefore considered that the said plaintiff does recover against
f. 323) the said defendants his damages, by the jurors aforesaid, in form aforesaid, found; and also two hundred and thirty dollars and eighteen cents, for his costs and charges by him laid out and expended, and about his suit adjudged of increase to the said plaintiff by the said court now here with his suit; which said damage, costs, and charges in the whole amount to nine hundred and thirty dollars and eighteen 180
cents; and the said defendant, in mercy, &c.

Judgment signed the 11th day of July, 1843.

ANSON LITTLE, *Clerk.*

Endorsement.—United States circuit court, northern district of New
f. 324) York; Henry Burden vs. Erastus Corning, John F. Winslow, and James Horner.

Record of judgment. DAVID BUEL, Jr., *Att'y.*

Da's $700; costs $230 18; total $930 18.

Filed July 11, 1843, 10 o'clock, a. m.

And I do hereby certify that the foregoing copy of a record of judgment has been compared by me with the original record on file in this office, and is a correct transcript therefrom, and of the whole of such original judgment record.

In testimony whereof I have hereunto subscribed my name, and 181
affixed the seal of the said court, this twenty-third
f. 325) [L. S.] day of December, one thousand eight hundred and forty-four.

ANSON LITTLE, *Clerk.*

Defendant's testimony.

UNITED STATES OF AMERICA,
Northern district of New York, ss.

Depositions and evidence taken under and by virtue of the preceding annexed commission before me, Azor Taber, the commissioner therein named, at the city and in the county of Albany, in the said northern district, in a cause pending in the circuit court of the United States, for the said northern district of New York, in equity, wherein f. 326) the Troy Iron and Nail Factory is complainant, and Erastus Corning, John F. Winslow, and James Horner, are defendants.

And now, on this 5th day of June, 1849, at the place aforesaid, appear before me, Azor Taber, the commissioner above named, the said complainant, by Samuel Stevens, esquire, their counsel, and the said defendants, by David L. Seymour and William H. Seward, esquires, their counsel; and the said defendants give in evidence an instrument signed H. Burden, dated October fourteenth, one thousand eight 182 hundred and forty-five, a copy of which is marked exhibit A, and hereto annexed, and is, by mutual agreement, to be used with the same effect as if it were the original, with a copy of the certificate of the recording f. 327) thereof in the Patent Office, which is endorsed thereon; the execution whereof is admitted by the complainant. The defendants also give in evidence an instrument signed H. Burden, agt., dated October fourteenth, eighteen hundred and forty-five, a copy of which is also hereto annexed, marked exhibit B; the execution whereof is also admitted by the complainant; said copy to be read with the same effect as the original. The counsel for the complainant in due time objects to exhibit A as evidence, on the ground that it, not being a f. 328) license to use the machine secured by the patent in question, is not pertinent in relation to any question in issue in this suit; and in like manner objects to exhibit B as wholly irrelevant, and the question of their admissibility is reserved for the court.

John V. L. Pruyn, a witness produced before me, the said 183
commissioner, on the day and at the place first aforesaid, on the part
of the defendants in said cause, being by me first duly sworn in said
f. 329) cause, doth depose and say: That on or about the fourteenth
day of October, 1845, according to his best recollection, he was at the
counting-room of Erastus Corning & Company, in the city of Albany;
that deponent does not recollect whether he was sent for to come to
said room or not; that Henry Burden was there; also the above named
Erastus Corning and both the other defendants, according to deponent's
best recollection; that this deponent was informed by the said parties, or
one of them, and the fact was assented to by all in substance, that
they had come to an arrangement and settlement as to their difficulties,
f. 330) and deponent was requested to draw the necessary papers to
be signed for that purpose. The best feeling seemed to exist between
the parties; and it was remarked in substance by some or one of them,
and the remark was not dissented from in any way, that thereafter
they could go on harmoniously in the business of their respec- 184
tive establishments. Deponent recollects these general expressions
of good feeling and harmony, from the fact that he was gratified that
the difficulties between the parties had been settled, as he had per-
sonal friends interested in the matter on both sides. That deponent,
being so requested as aforesaid to draw the requisite papers between
the parties according to his present recollection, stepped to the desk in
said counting-room, and drew the agreement between the said Henry
f. 331) Burden and the above named defendants, bearing date the
14th day of October, 1845, referred to in this cause; or it may be that
deponent only made a memorandum, from which said agreement was
drawn at his office; but his strong impression is that he drew the agree-
ment there, and that, it having received the approval of the parties at
that time, a copy of it was made at deponent's office, and the paper
finally signed in the subsequent part of the day. Deponent considers
it proper to state that he then had very little acquaintance with or ex-
f. 332) perience in patent laws, and that, for reasons chiefly of a 185
personal character, he had avoided, as far as he conveniently could, all
knowledge of the particulars and merits of the litigation between the
parties, and that the instrument so drawn by him must have been drawn
according to the directions and suggestions of the parties then present.
Deponent, however, recollects that it was distinctly understood, and it
was the declared intent of the parties, that each should thereafter have
the right to manufacture spikes in such manner as they saw proper, and
f. 333) that Mr. Burden was to have the exclusive right to manufacture
the patent horse shoe.

And this deponent further says, that the agreement between the
Troy Iron and Nail Factory by the said Henry Burden, as their agent,
and the said Erastus Corning, for the sale by the former, and the
purchase by the latter, of the undivided one-half of part of certain
wharf property, bears date the 14th day of October, 1845, as appears
by one part of the said agreement in this deponent's handwriting, now

f. 334) in the hand of this deponent. That deponent has a general recollection of the transaction relative to the said contract, and the difficulties that had arisen as to the said wharf property, as to 186 which he had been informed previously and more particularly by the said defendant, James Horner; and that this deponent has no doubt, from the correspondence in the date of the two contracts above referred to, and his general recollection of the facts, that the said two agreements were entered into simultaneously, and as part and parcel of the same general arrangement.

f. 335) (To the whole of the above evidence by this witness the counsel for the complainant in due time objected, as not pertinent, as irrelevant and inadmissible in this cause; and the same is taken, subject to the objection.)

J. V. L. PRUYN.

On his cross examination by the complainant's counsel, (made without waiving, but insisting on said objection,) this witness says that the defendants' exhibit A is in his, the witness's, handwriting, except the signature; that he is now able to state that he drew the original instru-
f. 336) ment, a copy of which is marked A, and that it was drawn 187 according to his understanding of the instructions given at the time by the parties to it—but which of the parties actually gave the instructions he is now unable to state from memory; but that whatever instructions were given by any party were acquiesced in by all the others. That, according to his best present recollection, the writing expresses what he understood, and all he understood at the time, to be the agreement between the parties in regard to the manufacture of spikes.

J. V. L. PRUYN.

Henry H. Martin, a witness produced on the day first above men-
f. 337) tioned, on the part of the defendants, being by me duly sworn, doth depose and say: That he was one of the stockholders and trustees of the Troy Iron and Nail Factory until the adjustment of the differences between Henry Burden and the other stockholders. That in the time when those differences were pending, the said Burden complained to this deponent that the stockholders were using the fact of his having given the agreement of October 14th, 1845, as the ground for refusing to allow him his thirty per cent. on the profits of the operations of 188
f. 338) said company under the agreement on that subject. This deponent insisted that the exclusive benefit of all the patented machinery for making spikes was the very consideration of the agreement to allow the said Burden the said thirty per cent. The said Burden replied in effect that he considered the agreement of 14th October, 1845, as made for the benefit of the company, as it gave the company an exclusive right to make horse shoes.

And this deponent further says, that he was present on the examination of Charles M. Keller, as a witness for the said Burden, in the arbitration suit between the stockholders and said Burden, and the said

f. 339) Burden then declared that the said invention of the bending lever was not an infringement of his former invention or machines for making spikes, but was a distinct invention.

(To the whole of the above evidence of this witness the counsel for the complainant in due time objected, as not pertinent, as irrelevant and inadmissible in this cause, and the same is taken, subject to the said objection.)

H. H. MARTIN. 189

Rufus G. Beardsley, a witness produced on the day first above men-
f. 340) tioned, on the part of the defendants, being by me duly sworn, doth depose and say: That in the month of October, 1845, he was a student at law in the office of Pruyn & Martin, in the city of Albany; that he recollects the fact of the execution of the two instruments in writing referred to in this cause; one, an agreement between the defendants in this cause and Henry Burden, bearing date the 14th day of October, 1845, for the settlement of a suit in this court, and relative to the manufacture of spikes and horse shoes; the other, an agreement
f. 341) of the same date, between the Troy Iron and Nail Factory, by the said Henry Burden, as their agent, and the said Erastus Corning, for the sale by the former, and the purchase by the latter, of the 190 undivided half part of certain wharf property. That deponent copied one or both of said instruments, the original of which were in the handwriting of John V. L. Pruyn, one of the said firm of Pruyn & Martin, and were, on the 11th August, 1848, shown to deponent, they then being in the possession of the defendants. That the said Burden and
f. 342) Winslow came to the office of Pruyn & Martin in company; that deponent made said copies while said Burden and Winslow were waiting for them; that said Burden executed both said agreements at that time, and the said Winslow the one to which he was a party; and that, according to his best recollection, the agreement to be signed by said Corning and Horner, and the other to be signed by said Corning, were taken either by said Winslow or Burden to procure the signatures of said Corning and Horner.

(To the whole of the evidence by this witness the counsel for the
f. 345) complainant in due time objected, as not pertinent, as ir- 191 relevant and inadmissible in this cause; and the same is taken, subject to the said objection.)

R. G. BEARDSLEY.

The counsel for the defendants gave in evidence, without objection, an exemplification of certain papers and proceedings in a suit in equity in the circuit court of the United States, for the northern district of New York, in which Henry Burden is plaintiff, and the defendants are defendants; which exemplification is marked exhibit C, and is hereto annexed.

f. 346) The counsel for the defendants then gave in evidence (subject to the objection of the counsel for the plaintiff, that they are irrel-

evant) letters patent of the United States, reissue No. 78, to Erastus Corning and James Horner, for the invention, by William Osgood and Ebenezer Hunt, of a new and useful improvement in the machine for making wrought iron spikes and nails, for which letters patent were granted, dated March 14, 1834, such reissue letters bearing date 192 January 15, 1846, to run for fourteen years from March 14, 1834, together with the specification and drawings thereto annexed; a copy of f. 347) all which is hereto annexed by consent, instead of and with the like effect as the original, and is marked exhibit D, and the original is to be produced on the hearing.

The counsel for the defendants then gave in evidence (subject to the like objection last aforesaid) letters patent of the United States to John F. Winslow and Israel Blanchard, for a new and useful improvement in the machine for making hook or brad-headed spikes, dated May 10th, 1845, for fourteen years from that day, together with the specification and drawings thereto annexed; a copy of all which is hereto annexed f. 348) by consent, instead of and with the like effect as the original, and is marked exhibit E, and the original is to be produced on the hearing.

The defendants' counsel also gave in evidence (subject to the 193 same objection as last aforesaid) letters patent of the United States to John F. Winslow and Thomas Osgood, for a new and useful improvement in machines for forming horse shoes, chain links, &c., dated August 11, 1843, for fourteen years from that day, together with the specification and drawings thereto annexed; a copy of all which is f. 349) hereto annexed by consent, instead of and with the like effect as the original, and is marked exhibit F, and the original is to be produced on the hearing.

The defendants' counsel then gave in evidence (subject to the same objection as last aforesaid) a copy of a bill in equity, filed in the supreme court of the State of New York, by the Troy Iron and Nail Factory, against Henry Burden, and four several affidavits annexed thereto, and filed therewith; which copy is hereto annexed, marked exhibit G, and is to be used with the like effect as if it were the original.

f. 350) The defendants then gave in evidence (subject to the same objection as last aforesaid) exhibits H, I, J, K, L, as follows: 194

Exhibit H, a submission to arbitration, made August 26, 1847, which it is admitted was executed by the several parties named in it.

Exhibit I, a stipulation as to an injunction, dated August 26, 1847, signed by Pruyn & Martin.

Exhibit J, an assignment by Henry Burden, dated June 20, 1848, of one share of the capital stock of the plaintiffs.

f. 351) Exhibit K, a promissory note made by Andrew White to Henry Burden, dated June 20, 1848, for twelve thousand dollars.

Exhibit L, a circular, signed H. Burden, agent, dated August 24th, 1847. The copies of the last named five papers, so made exhibits, are to be read with the like effect as if they were the originals. The de-

fendants then offered in evidence, subject to the objection of the counsel for the complainant that the same are not evidence, and are 195 inadmissible in this cause, exhibits M, N, and O, as follows:
f. 352) Exhibit M, a copy of a deposition made by Charles M. Keller, in the arbitration before named, December 29th, 1847, before Deodatus Wright, recorder of Albany.

Exhibit N, an affidavit made by Deodatus Wright, in this suit, August 4th, 1848, to which the above-mentioned copy, exhibit M, is annexed.

Exhibit O, an affidavit made by John R. Sturtevant in this cause, August 5th, 1848, to which the above-mentioned copy, exhibit M, is annexed. The affidavits constituting said exhibits N and O, it is mutually agreed, are to be read on the hearing, with the same effect as if f. 353) the persons making the same had appeared and testified to the same facts before me.

The defendants' counsel then gave in evidence (subject to the objection by complainant's counsel, that the same was irrelevant to 196 any matter in issue in this cause) a certified copy of a deed from the Troy Iron and Nail Factory to Erastus Corning, dated April 2d, 1847, which is hereunto annexed, marked exhibit P.

The defendants then gave in evidence (subject to the same objec- f. 354) tion as last aforesaid) the seven several letters from Henry Burden to John F. Winslow, which it is admitted were written by Mr. Burden, and received by Mr. Winslow, copies of which are hereto annexed, marked severally exhibits Q, R, S, T, U, V, W, instead of, and are to be read with the like effect as the originals; which originals, however, were objected to by the counsel for the complainant as inadmissible evidence in this cause.

Philip Ford, a witness, produced and duly sworn on the part of the defendants, on the day and at the place first aforesaid, doth depose and say: I have been in the service of the Troy Iron and Nail Factory, from the fall of the year 1818, to the first of July, 1848, as book-keeper. f. 355) My duty was somewhat varied; I used to keep the books; and for some time they kept a store, and I purchased the goods for the company. My place of business was in the counting room of the com- 197 pany at Troy. Checks on the bank, and notes given by the company, were countersigned by me; the agent signed them, and I countersigned them. Henry Burden acted as agent for the company from 1831 or 1832 to the first of August, 1847, until their annual meeting, which, I f. 356) think, was first Tuesday of August of that year. He acted, during that period, as general superintendent and agent of the company, and was the principal man there; checks and notes made by the company during that time were signed by Mr. Burden, as agent, and were those which I countersigned.

PHILIP FORD.

The testimony of the last witness was duly objected to before the

same was given, as irrelevant aad immaterial, and was taken subject to the objection.

Gilbert C. Davidson, a witness, produced and duly sworn on the part of the complainant, at the time and place first above-mentioned, f. 357) doth depose and say: I reside in the city of Albany; I have been connected with the defendants, Corning and Horner, in 198 their counting-house and store, as clerk and partner, for a period of fifteen years. I have no interest in the manufacturing operations of the Albany Iron and Nail Factory, nor in that business. I had a knowledge of the litigation between Mr. Burden and Messrs. Corning, Horner, and Winslow, about the manufacturing of spike. I was not present at any time when a settlement of that litigation was made between them. I knew, from Mr. Burden, of a settlement of their difficulties f. 358) growing out of the spike business. I learned from Mr. Burden, in the counting-house of the old store, that he had made a settlement of his difficulties growing out of the spike business with Mr. Winslow, and Mr. Corning and Horner. This, I think, was in the fall of 1845. I learned from Mr. Burden, at that time, that he, Burden, had agreed with Mr. Winslow, that, in consequence of his relinquishing the making horse shoes, he had agreed to allow Mr. Winslow to go on with him in making spikes, and divide the market with him. Winslow was, at that time, agent and principal manager of the Albany Iron f. 359) and Nail Company. All the different kinds of spike 199 were spoken of as those they were to manufacture; that is to say, hook-heads, boat, and ship spikes. I am not certain whether, in this conversation, he said any thing of his method of making spikes; but, in conversations on this subject, he has referred to his mode of making hook-headed spikes. He said to me that, by the above-mentioned arrangement, of the relinquishing the horse-shoe business by Mr. Winslow, he, Winslow, had a right to go on and make all kinds of spikes. f. 360) I understood him that Mr. Winslow was to make them on machinery which Mr. Burden claimed as his. Mr. Burden said that they, having by this arrangement the whole spike market between them, *they* could go on and get a price for them by which they could make considerable money. He said he preferred they should go on, with a perfect good will, understanding, and friendship, instead of going on quarreling. We had arrangements, by which the prices and discounts in the sale of spikes were regulated; this arrangement was between 200 f. 361) the Messrs. Townsend, who were acting as the agents at Albany of the complainant, and Messrs. Corning, Horner and Company, who were agents of the Albany Iron and Nail Company. Mr. Burden came to our store with young Mr. Theo. Townsend; there was a difficulty as to the difference between 30 per cent. and 5 off, and 35 per cent. direct; Mr. Townsend claimed, in a conversation with me, that it was the same; upon which Mr. Burden turned round and told him, f. 362) you had better go to school. Mr. Burden was opposed to putting the price down, and said, as they had the whole control of the market there was no occasion for putting the price down, or quarreling

about the price. The various kinds of spike, railroad, boat, and ship spike were spoken of, and brought up by the course of the conversation. I mean this railway spike, hook-head, and counter-sunk spike. No other spike is used in laying the T rail but hook-headed spikes. Mr. Burden mentioned that, as they had a kind of monopoly between them, f. 363) there was no occasion to reduce the price of their spikes. 201

I recollect of having a conversation with Mr. Burden, in Boston, at the Tremont house, in the fall or winter of 1845, as he was about starting for Europe; Mr. Burden said to me there, that, in consequence of Mr. Winslow having given up the manufacture of horse shoes, he had given him the right, equal with himself, to make all kinds of spikes; and intimated, I thought, that he, Burden, had got rather the better of the bargain of him. Burden, at that time, said it was better for both f. 364) to go on amicably; he said he had got this matter all settled up, and was going to Europe, more as a matter of pleasure than any thing else. In these conversations he claimed that the brad-headed spikes could only be made by means of his invention, and that they had the whole right between them. Burden, in that conversation at the Tremont house, claimed that he was exclusive inventor of the machinery by which the brad-headed spikes were made; and that, by the arrangement by which Winslow had agreed to give up the manufacture of horse shoes, he had authorized Mr. Winslow to go on and 202 f. 365) manufacture these spikes equal with him. He said, in that conversation, that Winslow had disputed that he, Burden, was the inventor of that mode. He said that it had caused him a great deal of trouble and anxiety, and now that he had got it all settled he went away from home feeling well. By his talk I considered it all settled. He asked me to go and see his folks, and gave me a letter to some one of his daughters, I think, which I sent up to the works; he desired me f. 366) to say to them that he had got every thing settled, and went away contented or satisfied; I understood it referred to this matter, as well as every thing else. This was after the fourteenth of October, 1845, and I think it was in December, the day before Mr. Burden sailed.

The Albany Iron and Nail Company were then engaged in manufacturing those hook-headed spikes, and, I think, had been from 1843; I think I was at the factory that season, that is, 1845; and I think they were using the bending lever for making these spikes. Judicious- f. 367) ly managed, the monopoly of the horse-shoe business would have been worth a great deal of money; I think I should have 203 been willing to give ten thousand dollars a year for it.

G. C. DAVIDSON.

The counsel for the complainant objected, in due time, to the testimony of this witness, as irrelevant, incompetent, and inadmissible; and the testimony is taken, subject to the objection.

On his cross examination by the counsel for the complainant, insisting upon and not waiving the said objection, this witness further says:

I do not remember but the two above mentioned with Mr. Burden
f. 368) during the fall and winter of 1845; one of these conversations
was at the store [of] E. Corning and Company, and the other at the
Tremont house in Boston. The conversation at the store, as near as
I can recollect, was between October and December; it was in the
counting-room. Mr. Corning and Mr. Horner were also in the count-
ing-room at the time, but were not paying any attention to what we
said; they were at the desk. The conversation was between Mr. Bur-
den and myself. He commenced the conversation; he said to me, that
f. 369) he had arranged his difficulty with Mr. Winslow, and that 204
Mr. Winslow had a right to go on and make the different kinds of
spike, particularizing hook-head among others; and that he had re-
ceived from Mr. Winslow the exclusive right to manufacture horse
shoes. He said that both parties were to go on and manufacture these
spikes, Mr. Winslow equally with himself, each having the right to
manufacture; and said they would control the whole market for spikes.
He talked to me about the sale of horse shoes, and said that the concern
should go on and sell all that they could, or that I should. I was, at
f. 370) the time, more the salesman than Mr. Corning or Mr. Horner.
He said they could make a great deal of money out of this spike
business, under this arrangement, having the exclusive right. I do not
now recollect any thing else that he said at that time.

At the Tremont house, the conversation was at the dinner table.
Mr. Burden sat next to me at the table part of the time, and a portion
f. 371) of this conversation took place in one of the little side parlors,
when we went in and sat down. I think Mr. Burden commenced the
conversation at the dinner table by saying, now that they had got 205
all their matters settled, he said to me that, in consideration of his giv-
ing Mr. Winslow the manufacture of hook-headed spikes and spikes,
Mr. Winslow had given up to him the exclusive right of the horse-
shoe business. He said that, by their arrangement, by which they
could both go on and make the spikes, they could make a good deal
of money by it. He said that the horse-shoe business must be an in-
f. 372) creasing business, and there must be a very large quantity of
them sold; and that the exclusive right to it, he having it, he could
make a great deal of money out of it. He said Mr. Winslow had
claimed the right to manufacture the brad-headed spike, and said he
had not the right; but that he had given up that right to get his horse-
shoe business, and to get his difficulties settled; that he had got tired of
litigation; that he was very happy to have got all these difficulties set-
tled; and that they had caused him a great deal of trouble and vexa-
tion; and he said, in this conversation, that they were both to go on
f. 373) and manufacture those spikes at their pleasure, as suited them,
and with any machinery they chose; or rather, I distinctly recol- 206
lect that he said that Mr. Winslow had the right to go on and manu-
facture them with the machinery that he, Burden, claimed as his own.
I recollect no other conversation that took place at the dinner table.
Charles Van Benthuysen knew of this conversation between Mr. Bur-

den and myself at the dinner table. There was no further conversation took place on this subject until the next morning; I believe it was f. 374) the next morning, as near as I can remember. The next morning we talked over the difficulties that had occurred between him and Mr. Winslow; and he said, I wish you would go and see my family, and tell them I have got all my difficulties settled, and go off in good spirits.

Question. Do you recollect that Mr. Burden recovered a verdict against the present defendants in the circuit court of the United States in 1842, for the violation, by the defendants, of Mr. Burden's patent for making the hook-headed spikes?

Answer. Yes.

Question. Do you know that the defendants used the machine patented by Mr. Burden for making the hook-headed spikes after that f. 375) verdict, and before the settlement spoken of between Burden and the defendants?

A. I do not know. The other conversation mentioned by me on the stoop of the old store in relation to prices occurred some time with- 207 in the last two years; there was a verbal arrangement about the price and discount, and when Mr. Townsend went away Mr. Burden remained, and said that he could not understand why there was so much quarreling and jangling about the prices; that he and Winslow were the only ones who had a right to manufacture the spikes, and there was f. 376) no reason for cutting down prices; the prices had better be kept up. He said to me, he thought Mr. Winslow had cut under him in price in the railway hook-headed spikes, which he said was not according to agreement; that they were to abide by the price strictly. This is about all I recollect at that time.

Question. Do you know whether hook-headed spikes were made at the defendants' works between the time of the rendition of the verdict in the suit mentioned, and the 14th of October, 1845?

A. I do know that they were made.

It is my opinion that, at the time of the alleged settlement, the ex- f. 377) clusive right of making the horse shoes was worth 25 per cent. more than the exclusive right of making the hook-headed spikes. 208

G. C. DAVIDSON.

This examination being continued by adjournment, by consent of the parties, until this sixth day of June, 1849, at the place first aforesaid, and the said defendants give in evidence two certificates of incorporation of the Troy Iron and Nail Factory, copies of which are f. 378) hereto annexed, marked "schedule X," the genuineness of which is admitted by the complainant's counsel, who objects to the same, in due time, as irrelevant and inadmissible as evidence in this cause.

The complainant's counsel on notice produce, and the defendants give in evidence, an instrument dated January 26, 1831, a copy of

which is hereto annexed, marked "schedule Y," the genuineness of which is admitted by complainant's counsel.

The complainant's counsel produce on notice, and the defendants' counsel give in evidence, a transfer of stock by E. F. Backus to Henry
f. 379) Burden, dated June 21, 1848, a copy of which is hereun- 209
to annexed, marked "schedule Z," to be read with the same effect as the original. Also a like transfer by John Townsend to Henry Burden of two shares of stock, a copy of which is hereto annexed, marked "schedule Z 1." Also a like transfer by Isaiah Townsend to Henry Burden, of one share of stock, a copy of which is hereto annexed, marked "schedule Z 2," which last mentioned two schedules are also to be read with the same effect as the original. It is now ad-
f. 380) mitted by the complainant's counsel, that on the 20th June, 1848, Franklin Townsend transferred, in the same form, to Henry Burden one other share of the like capital stock; and on the same day last mentioned, Henry Martin transferred in like manner to Henry Burden, one other share of like capital stock, which eight shares so transferred to said Burden by the said Backus, John Townsend, Isaiah Townsend, Franklin Townsend, and Henry Martin, together with eight other shares then owned by the said Henry Burden, constituted the whole capital stock of the last named company. All which evidence in relation to the ownership and transfer of said stock was in due time objected to as irrelevant, and not pertinent to any question
f. 381) involved in this cause. 210

At the request of defendants the complainant's counsel admit that Peter A. Burden is a son of the said Henry Burden, but the fact is objected to by complainant's counsel as wholly irrelevant to this case. It is also in like manner admitted, that after the transfers of stock by John Townsend, E. F. Backus, Henry H. Martin, and Franklin Townsend, and on the 20th of June, 1848, Henry Burden transferred to Philip T. Hart one share of the capital stock of the said company,
f. 382) and to Peter A. Burden three shares of the said stock, and also transferred to Andrew White one share of said stock, the last named transfer to White being the same shown by defendants' exhibit J. The counsel for complainant makes and continued the same objection as last stated to the evidence of transfer and ownership of said stock.

Samuel Stevens, esquire, being called as a witness for the defend-
ants, and duly sworn in this cause— 211

The defendants' counsel propose to the witness the following question:

1. Question. Did you draw the assignment of Henry Burden to the
f. 383) complainant of the 19th of June, 1848, or was it drawn under your direction at your office? 2. Q. Did you draw it by direction of Henry Burden? 3. Q. Did you deliver it to Henry Burden when it had been drawn, or when it had been executed, or what did you do with it, and by whose directions? 4. Question. What consideration, if any, was paid or secured for the assignment; to whom and how?

The complainant's counsel objects to the relevancy and pertinency

f. 384) of the facts sought to be elicited by the four preceding questions; in answer thereto the witness says, that after the settlement of the controversy, which was referred between Mr. Burden and Mr. Townsend, and others mentioned in defendants' exhibit H, which resulted in the transfer of stock from the Messrs. Townsend, Mr. Backus, and Mr. Martin; and on or about the 19th of June, 1848, and after I had understood that the terms of that settlement had been agreed 212 upon, and before the same had been carried into effect by the making of the transfers, Mr. Peter A. Burden and Mr. Henry Burden came f. 385) to me to consult me about instituting a suit at law, and a suit in equity, against the defendants for a violation of this patent, in favor of the Troy Iron and Nail Factory. I was informed by both of them that Mr. Peter A. Burden was to become a stockholder in the company, and take the principal charge of it. I then advised them that I thought the company could not maintain an action for the violation of this patent at law; that they were not the legal assignees of it; and that their only right to this patent, if any, was under the agreement of 1836. One of the alleged causes of complaint against Mr. Burden in the said f. 386) controversy between him and the Messrs. Townsend and others, was that Mr. Burden, in violation of his agreement with the company of 1836, had given a license to the defendants to use the machine in question; that as an answer to that cause of complaint, I, as Mr. Burden's counsel, had contended before the arbitrators that the Troy Iron and Nail Factory was not entitled to an assignment of the 213 patent in question by virtue of the agreement of 1836; and also that if, under the agreement of 1836, the said factory were entitled to the f. 387) benefit of the patent in question, that the instrument given by Mr. Burden to the defendants was the mere settlement of a suit, and no license to use the invention patented; and on this occasion I advised Mr. Burden that although I had taken the ground that the factory was not entitled to this patent by virtue of the agreement of 1836, that it was very questionable whether I was right; and as Mr. Staples, his other counsel, was very clearly of the contrary opinion, I advised him to make the assignment of the patent to the company, otherwise he f. 388) might endanger his 30 per cent., and the company could not take any proceedings at law to protect themselves from the violation of the patent. It resulted in Mr. Burden's concluding to make the assignment in accordance with my advice, and I drew the assignment and left it to be copied, but according to my recollection I was not present when it was executed, but was at Canandaigua. So far as I know, the instrument itself expresses the entire consideration on which it was executed. 214

SAMUEL STEVENS.

It is now admitted by the complainant's counsel, that counterparts f. 389) of the originals of defendants' exhibits A and B were executed and respectively delivered to Mr. Burden, but the said objects to the relevancy of said fact admitted.

Ralph Crooker, of Roxbury, in the State of Massachusetts, a witness produced on the part of the defendants, being by me duly sworn in this cause, doth depose and say: My occupation is the manufacture of iron bars, nails, and spikes; the different kinds of wrought spikes are called ship and boat spikes, hook or brad-headed spikes which are used for railroads chiefly; ship spikes have heads which are of equal size all
f. 390) round the spike like a nail; the brad-headed spikes have the whole or principal part of the lateral projection of the head all one side; a spike of this description is shown to, and identified by, the witness. The first ship spikes I ever saw made by machinery were 215 made by Mr. Burden about fifteen years since, as near as I can now recollect; I saw them made by machinery a few years afterwards at the defendants' works. I have known these hook-headed spikes as an article of merchandise some years prior to 1840; there are various kinds of railroad spikes; some have heads like ship spikes; this kind is used for fastening the chains of rails on railroads, and also for fastening
f. 391) down the rails where holes for this purpose were made in the rails. The counter-sunk spike is used for nailing down the flat iron rail, the cavity being sunk in the rail to receive the head of the spike in addition to the hole through the rail. The brad-headed spikes are used for fastening down the T and also the U rail, where there is a web to the rail over which the head of the spike laps to hold down the rail. I do not know the year when the latter sort of spikes were brought into use, but I first saw them after they began to use the T
f. 392) rails, but I should think it was early as 1835; the first I saw were made in this country, and were made by hand with hammers; I first knew the brad-headed spike made by machinery in April, 216 1839, on the mill-dam in Boston, or rather at Roxbury, in the edge of the city; I saw the machine when it was being built, and when it was first started. The machine I speak of was one for which a patent was taken out by Richard Savery, who built the first machine of this kind, and first put it in operation in Pittsburgh, Pennsylvania. The ma-
f. 393) chine of Savery, as patented, was intended originally for the manufacture of ship spikes; the rod was first passed between the dies and gripped, and was then headed by means of a die which was fixed in a bar or slide on the machine; this bar was carried forward by means of a cam against the end of the rod which formed the head of the spike. The heading die was made in the form that the top of the head was desired to have. Mr. Savery went to Massachusetts and saw Mr. Ho-
race Gray, who was treasurer of the Boston Iron Company, and offered to build such a machine for him; at that time I was superintendent of
f. 394) that company's works, and was requested by Mr. Gray to see Mr. Savery and talk with him concerning the machine, and give Gray my opinion of the machine; this was some time in the winter of 217 1838–'9, not later than January, whether before or not I cannot say. In the course of my conversation with Savery I asked him if he could make brad-headed spikes, such as were used for railroads. I told him if he could not it would be of little use to the company, as their orders

were principally for this kind of spikes. He told me he never had
f. 395) made any of that kind, and asked me how I thought it could
be done; I told him I thought it might be easily done by bending the
end of the rod, and forming the heading die to give the top of the head
the required shape. He remarked to me that there would be no diffi-
culty in doing that on his machine. He afterwards engaged to build
a machine for Gray for the Boston Iron Company to make ship spikes
f. 396) and brad-headed spikes. The fitting up of the machine in the
machine shop was commenced some time in February. The machine
was completed early in April ready for making brad-headed spikes, 218
but I cannot state the day; to try the movement of the machine, we
first made lead spikes in the shop where the machine was built; this I
think was as early as the 10th of April. The machine was then taken
to a building and set up, and water power applied to it, and it was put
f. 397) in operation making the iron spikes. The first iron spikes were
made on this machine either the 15th or 17th of April, 1839; I cannot
be certain which of these two days. We continued to work that ma-
chine in making spikes several years. The machine when it was
started required some adjusting, but the bending operation worked per-
fectly from the first starting; there was no alteration in the operation of
bending the head; some were required in the pointing dies at first.

The bending of the rod in the machine was effected by a cam which
f. 398) gave the motion to the other parts of the machine. This cam
struck against the end of a bar which on the side of it was wedge 219
shaped, and this bar being moved forward, struck against the end of
another bar, and carried that forward against the end of the rod which
formed the spike, and bent it; then the heading die was brought for-
ward by motion from the same spindle, and pressed the head into the
required form. The witness being shown a model claimed by the de-
fendants to be a model of the machine patented by Osgood and Hunt,
f. 399) and after examining the same, says the machine above men-
tioned, put up in Roxbury by Savery, differed from this, in the above
mentioned wedge-shaped bar thrust longitudinally forward by the cam,
and by its wedge shape pressed or thrust forward the said other bar,
transversely, in such a manner that the head of the spike was bent
laterally in the direction of the second above mentioned bar, instead of
being bent downward as in the said model; both the said bars operated
horizontally, the second nearly at right angles with the first.

All the testimony of the last above witness was in due time objected
f. 400) to as irrelevant, and the evidence taken subject to the objec-
tion. And the said evidence was also in due time objected to on 220
the further ground that the same is inadmissible under the answer
which sets up no such facts as the evidence tends to prove.

RALPH CROOKER.

On his cross examination by the counsel for complainant, made with-
out waiving said objections, this witness further says: The machine
built by Savery was sold to Cox, of Malden, some four years since,

according to the best of my recollection. Cox sold it to two men by
f. 401) the name of Odiorne—Francis Odiorne and his brother, as I
understood. I was examined as a witness in a cause in the circuit
court of the United States at Boston, in which the present complainant
was complainant, and the said Francis Odiorne and others were de-
fendants, and my testimony in that case was substantially what I have
now testified to; I was told it was a suit to restrain or enjoin Mr. Odi-
orne from using the above mentioned machine; I understood it was
the use of this same machine made by Savery that was complained of
in that suit. Hiram H. Chubbuck worked some on this machine when
f. 402) it was constructed, and afterwards worked or operated the ma-
chine; Savery worked it until it was satisfactory to and accepted 221
by the company, and then Chubbuck worked it the first of any one
after it was accepted. It is more than I can say whether it was ac-
cepted by the company before the first of May, 1839, but it is my im-
pression it was not accepted before that time.

RALPH CROOKER.

On his re-examination by the counsel for the complainant, this wit-
f. 403) ness further testifies that Richard Savery above named formerly
resided in Fairhaven, Bristol county, Massachusetts, and went from
there to Pittsburgh, Pennsylvania, where he invented this machine.

RALPH CROOKER.

And now, on this 9th day of June, 1849, to which time this exami-
nation is held open by mutual agreement, the defendants give in
evidence, (subject to the objection by the complainant's counsel, that
the same is irrelevant and inadmissible evidence in this cause,) a letter
bearing date the 10th of February, 1848, to J. F. Winslow, esq.,
f. 404) signed by said H. Burden, a copy of which is hereto annexed,
marked exhibit AA, to be read with the same effect as the original.
Also another letter dated February 15th, 1847, addressed to Mr. J. F.
Winslow, signed by said H. Burden, and the postscript thereto signed
H. B., a copy of which is hereto annexed, marked exhibit B B, 222
to be read with the same effect as the original, and subject to the same
objection as last aforesaid. Also the defendants give in evidence arti-
cles of agreement dated December 2d, 1836, between said Henry Bur-
f. 405) den and the Troy Iron and Nail Factory, the execution whereof
is admitted, and a copy whereof, to be read with the same effect as the
original, is hereto annexed, bearing date December 2d, 1836, marked
exhibit C C.

The defendants also give in evidence a certified copy from the Patent
Office of the assignment of 19th June, 1848, from Henry Burden to
the complainants, which is the same as set out in the answer.

It is admitted by the complainant that the defendants took possession
of the wharf described in the deed from the complainant to Erastus
f. 406) Corning after the 14th of October, 1845, and have ever since
continued in possession thereof. 223

It is mutually admitted that the factories of the complainant and defendants are located on the same stream in the city of Troy, and the lands of the respective companies adjoin each other, and that the respective workshops are within sixty or seventy rods of each other; and the residence of Mr. Winslow and Mr. Burden are within a like distance of each other, and on or adjacent to said lands; and that since the date last mentioned, said respective parties have used different ends of the same wharf for shipping and receiving; and also the same road f. 407) for a part of the distance from their respective factories to said wharf; also that the defendants paid to Henry Burden fifteen hundred dollars by the check of John F. Winslow, agent of the defendants, for that sum, with interest, for the consideration of the deed of the wharf property mentioned in the pleadings; and that the check was drawn payable to Henry Burden, agent; also that on the 18th June, 1839, the defendants completed the execution of an order for seventy-five thousand hook-headed spikes, for the Little Schuylkill and Susque- f. 408) hannah Railroad Company, which order was made on the 21st January, 1839; also that the share of stock which was assigned by 224 Henry Burden to Philip T. Hart, was assigned in the same form and upon the same conditions as the share which was transferred to Andrew White, as heretofore proved, and that a note was given by said Hart in the same manner as by said White; all which admissions herein last above enumerated were made by the complainant's counsel, subject to the objection that the matters admitted were irrelevant and inadmissible evidence in this case.

f. 409) The defendants then produced, as a witness on their part,

William Iler, who, having been duly sworn, testified as follows: I am employed at the defendants' factory; I have been acquainted with the machinery for making hook-headed spikes since the year 1835; they first tried experiments in making hook-headed spikes at the defendants' factory in the spring of that year; the experiments were tried upon a machine like that represented by the model produced in court by the defendants; the last experiment they tried was to use a bending lever moved by a cam attached to the shaft in the same way 225 f. 410) the bending lever is now moved; from 1835 to 1839, the bending lever remained of the same form; it might have been varied a little in shape, but the principle of it was the same; the bending lever used in 1835, and that used in 1839, produced the same effect in the same way; both were moved upon a centre, and both were moved by a cam. In 1839 about ten tons of hook-headed spikes were made by the defendants; the spikes made were imperfect, but the defect was in the cutting off the rod, and not in the bending of the head; the defect of f. 411) the first bending lever we used was that being made of wrought iron it would spring; the cast iron bender was put in to make it stiffer; there was no other difference between the wrought iron bender used in 1835, and the cast iron bender used in 1839.

Upon his cross examination the witness testified as follows: I went f. 412) to the defendants' factory to work in the fall of 1834, or 226

spring of 1835; I had been there but a short time when the spikes were made; I am twenty-six years old now; I fed a spike machine when I first went there; I was kept at feeding spike machines until I was able to run one myself; all the repairing of the machines was done in the shop; when I first saw the bending lever it was on the machine; I don't know who made the first lever; this was in the spring of 1835; I remember it, because in the fall of that year we sent the machine on which it f. 413) had been used to Pittsburg; the lever that we used in 1835 has been made a little shorter since; I think both the Mr. Osgoods used it, but am not certain; I have no recollection who made it; I saw an awkward looking spike coming down the spout of the machine, and I went and examined it; I had never seen one before; it was in the same room where I worked; I have not conversed with any one about the machine since; I know Lewis De Selle; I saw him in the factory in 1839; Mr. Osgood was making hook-headed spikes; the difficulty in f. 414) making them was in cutting off the points; Blanchard gave it up as a bad job. 227

Thomas Osgood was then called as a witness for the defendants, who testified as follows: I reside in Troy; I am employed in the defendants' spike factory; I first became acquainted with the bending lever in 1835; I can't say what time in that year; I first saw it used in the defendants' factory; it was constructed like that now exhibited here; it did not differ in principle from that used by the plaintiff; it was moved f. 415) by a bolt in the cam wheel on the driving shaft; I made hook-headed spikes upon the machine with the bending lever in 1835; we made some spikes at that time to put on sample cards; there is no difference in principle between the lever used in 1835, and that now used by the defendants. In 1837 the defendants offered to make a quantity of hook-headed spikes for the Nashua and Lowell railroad, and samples were sent for that purpose by James Horner. A large quantity was made for the Little Schuylkill and Susquehannah railroad; we com- f. 416) menced making them in February, 1839, and completed the order the last of July or first of August the same year. I made the 228 model from which the cast iron lever was cast in April, 1839; a lever was cast in February, 1839, but I do not recollect whether a cast iron lever was put upon the machine at that time or not; it was put on in July, 1839. The cast iron lever was put on because it was handier and stiffer; there was no spring to it; I know Louis De Selle; I never asked him whether my pattern looked anything like Burden's machine- f. 417) ry; I did not ask him anything about Burden's machinery at the time we were about putting on the bending lever, or getting the pattern made for it.

Being cross examined the witness further testified as follows: I have been employed in the defendants' factory since 1836; I never said to any one that I could not get along making hook-headed spikes without taking Burden's bender; my business is taking care of the machine, and doing other work about the factory; I have worked in the pattern shop, but my business is spike making; I make my own patterns; I

f. 418) worked in the plaintiff's factory in 1824 and part of 1825; I then run a cut nail machine; I made the first ship spikes that was 229 made in the defendants' factory; John Miller and Edward Chambers made the bending lever in 1835; I cannot say that I saw them make it; John Miller now resides on Green Island, opposite the city of Troy; Chambers resides in Troy; I have lately conversed with him about the f. 419) bending lever; they did the forging for the factory; I don't know who made the pattern, or who gave them the plan.

Edward Chambers being called, and sworn as a witness for the defendants, testified as follows: I am a blacksmith, and live in Troy; I have been employed in the defendants' factory since April, 1835; I recollect making a wrought iron bending lever for a spike machine by the direction of William Osgood; it was between April and the last of July, 1835.

f. 420) Being cross examined, the witness further testified as follows: I know the time when the bending lever was made very well, for it was the first year I went there; Mr. Turner was then the agent; he is now dead; Mr. Osgood gave me a kind of pattern, partly in chalk 230 and partly in a nail rod; I did not see the bender at work, but saw it on the machine; it was then called a lever for bending spike rods; I did not know what it was for until I saw it on the machine.

f. 421) Israel Blanchard was then called as a witness for the defendants, who, having been sworn, testified as follows: I am employed in the defendants' spike factory; I commenced there in the spring of 1835; I recollect that a machine was made there for making hook-headed spikes; according to my best recollection it was in the fall of 1835; it might have been in the spring of 1836. Hook-headed spikes were made upon the machine; they were made with a lever like that now shown here. The only difficulty about it was, that it did not f. 422) always bend the spike right. We made one or two hundred spikes with it at that time. I did not make any the next year; I was not there. In 1838 Thomas Osgood commenced making experiments for the purpose of making the bender stronger; the cast iron bender was put on in the spring of 1839; it does not differ at all from the 231 wrought iron bender used before; it does the same work upon the same f. 423) principle; the cast iron lever is stronger, it does not give at all. We made some hook-headed spikes with the wrought iron bender in 1838; I made some twelve or fifteen hundred pounds with it towards spring that year.

Being cross examined by the counsel for the plaintiff, the witness further testified as follows: I finished off the spikes myself. I could not bend the heads perfectly with the wrought iron bender; I finished some with the hammer and some by grinding; I put on the bending f. 424) lever the first time in 1835; I think I went away from the factory in June, 1837, and returned in January, 1838; Iler made experiments with the machine after I did. In the spring of 1838 Mr. Winslow told me if I would go on and make the spikes for an order he had, he would give me a new coat. I know that the machine was worked

some time with a wrought iron bender. The cast iron lever was put on early in 1839; it was a year before the cast iron lever was 232
put on that Winslow told me if I could go on and fill the order he
f. 425) would give me a new coat. I worked at it about ten days, and gave it up because I was sick. I also worked at it a few days in 1839, shortly before the cast iron bender was put on. Osgood was then taken sick, and wanted me to go on with the work. Iler made an alteration to help the lever, because it was not strong enough. The spikes which were made just before the cast iron bender was put were good spikes. The spikes shown here were made with the wrought iron bender before the cast iron bender was put on.

f. 426) Philander Tracy being called, and sworn as a witness for the defendants, testified as follows: I am employed at the defendants' factory; I went there the latter part of August, 1837; a day or two after I went there William Iler showed me a hook-headed spike, and told me it was made in the defendants' factory. This was just before I commenced working for the plaintiff. 233

Upon his cross examination the witness further testified as follows:

f. 427) The defendants' factory was in operation at the time I was there in 1837; I was there as often as once or twice a week, until I went into the plaintiff's employ. I remained with the plaintiff about a year, and then went into the defendants' employ, where I have remained ever since, with the exception of about seven weeks.

Thomas Osgood being recalled, and examined by the counsel for the defendants, further testified as follows: The defendants' factory was running part of the time during the summer of 1837, a part of the hands discharged and a part retained. The first demand for hook-headed spikes was in the winter of 1838. The defendants' first order of any considerable amount was for the Schuylkill railroad. It was
f. 428) received on the twenty-first day of January, 1839. Before that time I never heard of any considerable demand for the article. Since that the demand has considerably increased. The hook-headed spike is used for the T rail. 234

The preceding evidence of the witnesses, William Iler, Edward Chambers, Israel Blanchard, Philander Tracy, and Thomas Osgood, taken in a suit at law in this court, between Henry Burden and the same defendants; the record of the judgment, in which cause is com-
f. 429) plainant's schedule No. 1, was here inserted, as there sworn by agreement of parties, subject to the objections hereinafter stated as if sworn in this cause.

The defendants then called the above named Thomas Osgood, who, having been duly sworn, further says: The defendants discontinued making horse shoes some time late in the spring of 1845, and have made none since. I have been in the employ of the defendants, as a workman in their factory, ever since the month of July, 1826, and have acted as foreman of the defendants in the spike factory ever since some time in the summer of 1838. I believe the hands in the respective
f. 430) factories visit each other, from one factory to the other, habitu-

ally. I have seen Mr. Burden at the defendants' factory, but not very frequently. The cast iron bending lever, above mentioned in my 235 previous examination, was placed on the spike machine, also above mentioned, about the 24th of February, 1839. It was cast at Starbuck and Son's furnace at Troy; the bill of casting was dated the 21st of said month of February, and we were three days putting it on the machine. We had been using a wrought iron bending lever before that.
f. 431) On the 18th of June, of the same year, another cast iron lever, of the same pattern, but a few pounds heavier, was put on another machine in the defendants' factory, which last lever was cast at the same furnace as the former.

The preceding evidence by the witnesses, William Iler, Thomas Osgood, Edward Chambers, Israel Blanchard, and Philander Tracy, was objected to by the complainant's counsel, in due time, as irrelevant, and taken subject to the objection.
f. 432) This witness further says, that since the 14th of October, 1845, the defendants have had the bending levers on six different 236 machines. Since the last mentioned date they have had, on an average, two machines with bending levers working continually, making hook-headed spikes.

On his cross examination, by the counsel for the complainant, this witness further says, that he cannot say that he has seen Mr. Burden at defendants' works since August, 1841. We used the first lever cast by Starbuck and Son, above mentioned, eight or nine years. I had f. 433) to lengthen it out by putting on a longer cam than usual before we used it at all. I don't suppose I remember any better about making the pattern for the lever and the casting of it, which occurred in 1839, than I did in 1842. I made the pattern from which the first cast iron lever was made, which we used on a machine. I made it with the assistance of another man.

On his further direct examination by defendants' counsel, the witness says, that at the time of his examination in 1842, he had examined the bill of castings of the first cast iron lever, but did not have it f. 434) with him at court. I have, since then, a number of times examined it as to the date. I now fix the time when I put the lever 237 on from the fact that I received the bill the same day I received the castings, and commenced immediately putting it on, and we were three days putting it on. I could not state positively, when examined in 1842, whether a cast iron lever was put on the machine in February, 1839, or not, as stated in the report of my testimony then and herein above contained, because I had not the bill of the casting with me at the time.

THOS. OSGOOD.

f. 435) Israel Blanchard, a witness produced on the part of the defendants, being by me duly sworn in this cause, says, that he has worked for the defendants eighteen years, and in their spike factory fourteen years. In November, 1844, the defendants were not using

the bending lever. In the months of August and September, 1844, the defendants were using the dies for making hook-headed spikes, and f. 436) continued to use them four or five months, without the bending lever. Before that, and after that, they used the bending lever. They were using the bending lever in making spikes on 14th of 238 October, 1845; they used it about all the time afterwards, except when they were making reversed points. I have seen Mr. Burden at the defendant's factory; I can't say at what time; I think I have seen him there once since the new factory was built; I saw him there when we were making hook-headed spikes. The new factory was built in 1844; f. 437) Mr. Hoyle was with Mr. Burden at the time I saw him at the factory. I am well acquainted with making brad-headed spikes, and the price for making them. A spike could not be made, without using the bending lever, as cheap or as good as it can with the bending lever. It would make a difference of three or four dollars on a ton.

The complainant's counsel object to all the testimony of this witness as irrelevant.

On being cross examined by the complainant's counsel, witness testified as follows: I was a witness on the trial of the cause between Mr. Burden and the defendants in 1842, and I recollect the verdict in that f. 438) case. I believe we did stop using the bending lever at one mill immediately after that verdict was given; we put on the dies 239 in August or September, 1844, and used them four or five months, and then Mr. Winslow told me I might put on the bending lever if I had a mind to, and I put it on.

his cross
ISRAEL ⋈ BLANCHARD.
mark.

In presence of—
D. L. SEYMOUR.

f. 439) The counsel for the defendants then introduced, as a witness on their part, Charles M. Keller, who having been duly sworn, and being examined by the counsel for the defendants, says:

I was for nine years the chief examiner in the Patent Office, from 1836 to 1845, when I resigned; my duties were to examine the inventions presented, and decide upon the questions of novelty, and the patentability of the things claimed as new; I also had to decide upon the legality of the papers. I am a mechanical engineer by profession, 240 practically and theoretically; I have made it my especial duty to study f. 440) the history of inventions, and make myself familiar with the description of machinery. On the 29th day of December, 1847, as near as I can remember, Henry Burden submitted to me as a witness, called by himself, and sworn in a cause or arbitration between him of the one part, and the Troy Iron and Nail Factory, John Townsend, E. F. Backus, Henry H. Martin, Isaiah Townsend, and Franklin Townsend, the specification for a patent of the manufacture of wrought nails or spikes, issued in 1825 to Henry Burden, and also the f. 441) specification of a patent granted to Henry Burden in 1834, for

an improvement in the machinery for heading nails or spikes, and was produced and sworn to this deponent on the same occasion by the said Henry Burden. He knows, has read, and is acquainted with the patent and specification granted to the same Henry Burden on the 2d day of September, 1840, for a new and useful improvement in the machinery for making hook or brad-headed spikes, and the same was pro- 241
duced and shown to him on the same occasion by said Burden.
f. 442) In the opinion of witness the said invention of 1840, as described in the last mentioned patent, is entirely independent of those of 1825 and 1834, before mentioned. The principle of the invention of 1840 is for giving a head to that part of the iron preparatory to forming the hook head irrespective of the machinery which holds the iron, or forms the point of the spike, and this principle may be used in connexion with any machine which grips the rod and inserts the iron to form the head, and does not necessarily involve the use
f. 443) of the machine patented in 1825 and 1834. The use of the machine patented in 1840 would not infringe the patent of 1825 or the patent of 1834. The spikes made by the machines patented in 1825 and 1834 have the head formed all around, and are commonly known as ship or boat spikes. Those made in the machinery of 1840 have the head all on one side, and are known by the name of the hook-headed spike, and are generally used for a different purpose, and sometimes for the same purpose that the first are used for. The 242
f. 444) hook-headed spike is generally used for fastening the rail in the construction of railroads. The term improvement, upon an existing machine, is used to signify such a modification of the original principle as necessarily involves the use of the original principle. Witness has examined a model which represents essentially the machine described in the patent of 1825. There are several modifications of the principle of rolling the spike described in the patent of 1825. The model only represents the first example described in the first, second, and third
f. 445) pages of the specification; that he has also examined the model of the machine described in the specification of 1840; that both of these models were present on the occasion before stated; that the model of the machine of 1840 represents things not described in the patent of that date. It represents the method of forming the hook head on the spike, as described in the patent in connexion with the mode of form-
f. 446) ing the point of the spike different from that described in the patent of 1825; that the use of the invention patented in 1840, for making hook-headed spike, as represented by this model, would not infringe upon the patent of 1825 or that of 1834; that hook- 243
headed spikes are not, to his knowledge, ever used in the construction oi boats or other vessels; that they are never used for the purpose for which other spikes are constructed, unless from necessity; that the
f. 447) side steels invented in the patent of 1825 and 1834 guide the iron on two sides only, leaving the other two sides to be gripped by the rolling swedges. The gripping dies represented in the model of the machine of 1840 gripe the iron on four sides. Deponent never knew

gripes or jaws to be called side steels till the patents of 1825 and 1834. What are called side steels in these two patents should be called gripping jaws, as they hold the rods only on two sides like the jaws of a vice. f. 448) When they are made to embrace the bar on all sides, then they are to be called gripping dies. What are called side steels, as described in the patents of 1825 and 1834, cannot be used without the swedges, or some substitute for them. These gripping jaws were used, as deponent has learned from books, previous to 1825, and so were gripping dies. There were models in the Patent Office for making nails 244 previous to 1825, which had the gripping jaws and the gripping dies. Neither of the three patents spoken of in my testimony claims the gripping jaws or gripping dies. The heading box, as described in the f. 449) patent of 1834, is not now used as a separate thing.

Being cross examined by the counsel for the complainant, this witness further says: The machine patented in 1825 is for making wrought iron spikes or nails; from the description of the machinery in that patent of 1825, the head of the spike must necessarily be formed on all sides. You might so modify the header described in the patent of 1825, as to make the head of the spike all on one side, but it is not so f. 450) described in the specification. The heading part as described in that machine is substantially the same with the machines known prior to 1825. There is nothing in the description of the header in the patent of 1825 which prevents the changing of the form of the head of the spike, provided the form of the header be changed. There is nothing in the specification of the patent of 1825 which prescribes any particular form to the head of the spike. The patent of 1834 245 admits a change of the form of the head, but it seems to contemplate f. 451) a head on all sides. The shape of the head is left optional with the person making the machine. But as the specification points out the defects in the manner of making the head on all sides, leaving the head ragged, the object was to make the head smooth. The side steels are described in the specifications of the patents of 1825 and 1834. The patent of 1834 claims the making of these of chilled cast iron instead of steel.

f. 452) Question. Does not the patent of 1840 claim as a part of the mode of making the hook-headed spikes an alteration in the form of the side steels or dies, alluded to in the patents of 1825 and 1834?

Answer. It contemplates a change in the form of the gripping dies or side steels, according to the form desired to be given to the head.

The alteration of the gripping dies in the patent of 1840 was in- 246 f. 453) tended for the same purpose in relation to hook-headed spikes, as the box header in the patent of 1834 was for other spikes, that is, to prevent the metal from spreading too far and being ragged. The machines described in the patents of 1825 and 1834 would admit of being so altered as to make hook-headed spikes, but not particularly useful in my judgment. The sole use of the bender is to bend that part of the iron of which the head is to be formed, that the metal may be properly disposed so as to receive the action of the header that relieves

f. 454) the lateral force which would otherwise be required to form the head. The making of hook-headed spikes by a bender is a better mode than by any that could be adopted by any variation of the die box of 1834. The object of altering the shape of the gripping dies and the header, in combination with the bending the rod in the patent of 1840, was to determine the external configuration of the head of the hook-headed spike, as the die box was used in the patent of 1834 to f. 455) determine the configuration of the boat or ship spike. The altering of the gripping dies in the patent of 1840 also operated to prevent the head of the spike from spreading. With the gripping 247 dies of 1840, a box header is unnecessary and could not be used. I can make a box header with which I could make a hook-headed spike. I do not know of gripping jaws or gripping dies made of chilled cast iron previous to the patent 1834.

CHARLES M. KELLER.

f. 456) And now on this 12th day of June, 1849, to which day this examination of witnesses was adjourned by mutual consent, Henry Burden is produced as a witness on the part of the complainant, who, being by me duly sworn in this cause, doth depose and say: (this witness, before he was sworn, was duly objected to as incompetent, on the ground of interest, it appearing by the evidence already given that this witness is a stockholder of the complainant's company, and it being f. 457) now admitted by the complainant's counsel that he is at the present time the owner of five shares of stock of the last named company; but the counsel for the complainant insists that by the laws of the State of New York the witness is competent, the objection going only to his credibility; the evidence is taken subject to the said ob- 248 jection:) I am the patentee of the patent in question for making hook-headed spikes; I am the inventor of the machine for which that patent f. 458) was granted. I filed a caveat in the Patent Office upon this invention, bearing date on the 14th of April, 1838, (defendant's counsel object to the last above evidence, on the ground that it is not a fact that can be proved by parol evidence; the testimony is taken subject to the objection.) According to the best of my recollection the caveat was filed in said office in a few days, and within a week, next after its date. The witness produces a certified copy from the Patent Office of the said caveat, with the certificate of the Commissioner of Patents endorsed thereon, a copy of which is hereto annexed, and f. 459) marked complainant's exhibit No. 2, to be read with the same effect as the original. (The counsel for the defendants object to the last answer of the witness as inadmissible proof of the time of filing, being by parol. Immediately on sending away the caveat I started the machine in operation to make spikes, and found the parts for pointing and other parts of the machine did not operate well. These parts I 249 altered, or made alterations in them from time to time, which resulted in making the machine operate perfectly. The machine when first started was applied to making common ship or boat spikes, but this

f. 460) machine was devised and constructed especially for the application of the bending lever, as described in the patent of 1840 for making hook-headed spikes. I do not remember when the pointing apparatus was perfected; but in the month of May, 1838, we made hook-headed spikes on this machine with the bending lever, and sent them off as a sample. It was about, or very nearly, a year after I sent off the caveat before I got the machine completed to my satisfaction. The date of my petition for my present patent was, I think, the f. 461) 18th of April, 1839. My specification and drawings were returned to me once or more for amendment, before the patent was granted. It was also delayed by an examination in the Patent Office, on the ground that Savary and McCrone's application for a patent interfered with mine. The complainant now produced a certified 250 copy from the Patent Office of the petition of the witness for his said patent, together with brief notes from the Patent Office of the several delays and postponements in granting the patent, a copy of which is f. 462) hereto annexed, marked complainant's exhibit No. 3, to be read with the same effect as the original.

The witness further testifies: I have in my possession a certified copy from the Patent Office of a letter from Mr. J. F. Winslow, as agent of the Albany Iron and Nail Works, to H. L. Ellsworth, dated Troy, October 19, 1839, a copy of which is set out in complainant's exhibit No. 1. Mr. Winslow was a resident in my family, I think from June, 1838, until the first of April, 1839; during this period Mr. and Mrs. f. 463) Winslow were inmates of my family, I believe, without intermission. During that time I frequently showed to him and explained to him this invention of mine. He did not during that time claim to have in operation or to know of any machine like it. The equity suit, which it appears by the evidence and defendants' exhibit C, in this cause, that I had with the defendants, was settled on the 14th of October, 1845. The instrument, a copy of which is marked de- 251 fendants' exhibit A, was executed on that settlement.

The complainant's counsel gives in evidence two affidavits, one f. 464) made by the defendant, John F. Winslow, sworn to on the 25th of November, 1844; the other made by Thomas Osgood and Isaac Blanchard, sworn to on the same day; a copy of which two affidavits is marked complainant's exhibit No. 4, and hereto annexed, and to be read with the same effect as the original affidavits.

Besides the general objection to testimony of this kind, the defendants' counsel objects specially to these affidavits for irrelevancy, and to Blanchard and Osgood's affidavit, that it is on no ground admissible. f. 465) The witness further says, I remember a motion was made to open the order for an injunction which had been obtained in my favor on the bill in equity, by default; and I think the affidavits, of which complainant's exhibit No. 4 are copies, were served for that motion.

The defendants' counsel objects to this last answer of the witness, on the ground that this testimony is not the highest evidence of the 252 fact sought to be proved.

f. 466) I had, some time prior to the settlement of this suit, two patents for machines for making horse shoes. The complainant's counsel now produces a patent to the witness for a machine for making horse shoes, dated the 23d of November, 1835; a copy of which, with the specifications thereto annexed, except the drawing therein referred to, is hereto annexed, and marked complainant's exhibit No. 5, to be read with the same effect as the original. Complainant's counsel also produce a patent to the said Henry Burden, dated September 14, 1843, for an improvement in the said machine for making horse shoes, a copy f. 465) of which, with the specifications thereto annexed, except the drawings therein mentioned, is hereto annexed, marked complainant's exhibit No. 6, to be read with the same effect as the original.

I had, previous to this settlement, given Mr. Winslow and Mr. Corning, two of the defendants, notice that I would prosecute them if they did not cease making horse shoes with this machine, for an infringement of the said patent. After I gave them this notice I 253 think they did cease making these horse shoes. I think they had not made any of these horse shoes for six months or more prior to October f. 466) 14th, 1845. There was no other object in making the original of the said exhibit A, but to settle the equity suit, to my knowledge, with the exception that our claim of the exclusive right to use that machine for making horse shoes was admitted; by the word our, I mean the company to whom the patent was assigned, and I was acting for them.

To so much of this witness's evidence already given, and hereafter to be given, as relates to the invention of the thing patented, the counsel for the defendants object on the ground of its immateriality in this f. 467) suit. To so much of the said testimony as relates to the designs, construction, and effect of exhibit A, and the settlement therein made and referred to, defendants' counsel objected in due time, upon the ground that it is inadmissible to affect in any way the construction thereof; and defendants' counsel will insist upon these objections in the event that the counter testimony offered by the defendants on the 254 same subject shall be rejected.

This witness further says, that at the time the settlement was made and during its negotiation, Mr. Winslow assured me, in the most solemn manner, that he had not used my machine in making spikes, and f. 468) would not use it. There was not any thing said at all on that settlement as to my giving them a right or license to use my spike machine; they never asked me for it; by them, I mean Mr. Winslow and Mr. Corning, who were the only persons on that side with whom I had any conversation or negotiation on this settlement.

When I signed the defendants' exhibit A, I had no thought of giving them a right to use my spike machine. I never saw the papers constituting defendants' exhibits A and B, or either of them, before I f. 469) signed them, which was under the following circumstances: I met the defendant, Corning, in the street, and at his request went with him into the office of Pruyn and Martin, esquires, when the paper ex-

hibit B, in relation to the dock, was shown to me by Mr. Pruyn, while standing at the office table of said Pruyn and Martin, was looked over by me, and as it appeared to be correct signed by me, when the exhibit A relative to the settlement and manufacture of spikes and 255 horse shoes was also shown to me by Mr. Pruyn, and hastily glanced f. 470) over by me, and thereupon I signed it; the whole transaction of examining and signing said papers, which I had never seen before, occupying but a minute or two. I had about a week before this time seen said Corning, and informed him that I should prosecute them if they did not cease using the machinery of mine which they then used for making horse shoes, and said Corning had thereupon informed me that they would stop using it.

To all of this testimony, besides the general objection, the counsel for the defendants objects, that it is inadmissible in this cause, because it seeks to impeach exhibit A, for misapprehension of the witness on the f. 471) ground of surprise or fraud, and is therefore inadmissible under the issues in this cause.

This witness further says, the sale of the half of the dock to the said Corning, referred to in defendants' exhibit B, had nothing whatever to do with the settlement made in exhibit A, but was separate and dis- f. 472) tinct from it. This one half of the dock, at the time of 256 the agreement to sell it to Mr. Corning, was worth all of fifteen hundred dollars in cash. This dock, exclusive of the land occupied by it, at the time of said sale of half of it, had cost the company at least four thousand five hundred dollars in cash.

Question. Shortly after the controversy arose between you and the Townsends and others, and which was afterwards submitted to arbitration, as mentioned in defendants' exhibit H, were you informed that Mr. Winslow had stated to Messrs. Townsends that you had violated the contract of 1836 with the complainants, by giving the defendants f. 473) in October, 1845, a license to use this spike machine? The counsel for the defendants specially object to this question, on the ground that it calls for hearsay evidence.

Answer taken subject to the objection.

Answer. I was so informed.

Question. Soon after you had been so informed, did you meet Mr. Winslow, and inform him that you had been so informed?

Answer. I did. I met him somewhere in the road between 257 f. 474) the railroad station near the works, and the defendants' works, and there so informed him. He, in his answer to this communication, denied it; said it was not true; he said in connexion with this denial that it was impossible for him to have said so, for he, Winslow, had never asked me for a license and did not claim to have any. I am not positive, and cannot remember whether this was before the submission to arbitration mentioned in defendants' exhibit H. After this, and some time in the month of December, 1847, I had another interview with f. 475) Mr. Winslow at my house. I am able to fix the time of this last interview to have been the 17th or 18th of December, by the mar-

riage of my eldest daughter, which was on the 16th of December, and this interview was the evening afterwards. Mr. Winslow came with Mrs. Burden into the dining room at the supper table where I was sitting; she brought him in from the hall, and he took a seat at the table, and after passing a word or two with Mrs. Burden turned to me, and asked me how I was getting along with the arbitration. I replied, not f. 476) at all. I think these were the words used. I think he stated then that he was surprised that they (the other party) should persist 258 in this claim against me. He made some expression indicating that he regarded the claim unjust, and was surprised they should make it. I said in answer to this, that it was all in that paper, referring to defendants' exhibit A; that it was all narrowed down to that paper; and I said to him, it is in your power to settle that hash in five minutes, or words to that effect. He said he would cancel that paper, or deliver it f. 477) up now, but in doing so it might probably operate against me, as it might appear that there was some collusion betwixt us. He then said, that as he expected to be called before the arbitrators to testify, which, if the other party did as he expected they would do, he would explain the meaning of that instrument before the arbitrators, viz., that f. 478) it was no license, that he never asked for a license, that he didn't want a license, as if he had wanted one he should have had other names to the paper than mine, and spoke of John Townsend, and stated that if that would not be satisfactory he would throw the paper up in court. He said it would come better for me, if they called 259 him for a witness, but if they did not call him, I was to call him, and he said he would state these facts. I told him that I had been advised by Reynolds, Staples, and Stevens, that the paper was not a license, f. 479) and that I was entitled to the 30 per cent. from the company; but that aside from the question of the license, Mr. Stevens had told me that the invention was an independent invention, and the factory had nothing to do with it. Mr. Winslow advised me not to take that ground; he said that by the agreement of 1836 I had sold all that I had then invented, and all that I should ever invent, so far as spike making was concerned; that I had sold myself body and soul to the factory. I told him that I did not want to take that ground, (that is the ground that f. 480) I had mentioned to him as indicated by Mr. Stevens,) because it was not proper. I then felt, feel now, and always have felt, that all my services in that department belonged to the factory. The counsel for the defendants here specially object that the last answer is improper, as the witness's feelings are not evidence in this cause. In the sentence preceding the last sentence in his above evidence, the wit- 260 ness desires to insert the word "unjust" instead of the words "not proper."

f. 481) Mr. Winslow, at the time he spoke as above of my having sold myself soul and body to the company, added he was surprised the company should deal harshly with me, as all they had there was the product of my invention; other works without these inventions were not making any thing. After all this he asked me if I had the paper,

meaning the contract of 1836. I told him I had, and went up stairs and brought it down and handed it to him. After reading it, he re-
f. 482) marked that it was a very strong instrument, clear and specific, and binding on both parties to all the extent that he had before supposed, in binding the parties to pay me the 30 per cent., and giving the company the rights I had before stated. This spike machine, as soon as I got it invented and completed, was put into operation in the complainants' factory for their benefit. It was always considered by the complainants and myself as being the property of the complainants, under
f. 483) the agreement of 1836. I have had numerous applica- 261
tions from a number of States in the Union for rights under this patent, and have always answered such applications that it belonged to the company. I never said to Gilbert C. Davidson, in the city of Albany, the city of Boston, or any where else, that I had sold to the defendants the right to use the machine in question to make spikes. Mrs. Burden was present at the interview between me and Mr. Winslow at my house. There was an agreement between the two factories for the purpose of having a uniform price for spikes from the year 1836 up to at least 1847.

f. 484) The seven letters marked defendants' exhibits Q, R, S, T, U, V, W, bearing dates between the 9th of March, 1846, and the 29th of December, 1846, both inclusive, are now shown to the witness, and the witness is asked by complainant's counsel whether, at the time when he wrote any or either of these letters, he had any knowledge or suspicion that the defendants were using the machine in question for making hook-headed spikes. The counsel for the defendants objects to this question especially on the ground that the effect of the 262
f. 485) letters cannot be modified by the knowledge or ignorance of the witness concerning that fact, nor is the evidence pertinent to any issue. The witness answers, I had not. I have not been in the defendants' spike factory since August, 1841. I have been in their mill once. Marcus Hogle and William Gibson were with me when I went into the defendants' spike factory in 1841. I then went there for the purpose of ascertaining whether defendants were using this spike ma-
f. 486) chine, and took the two other persons above named with me as witnesses. That was before the suit tried in 1842 was brought, and that suit, of which complainant's exhibit No. 1 is the record, was brought upon information then obtained. After the settlement, in October, 1845, the first knowledge I had that the defendants were using this spike machine was derived from the evidence given on the trial of the
f. 487) above mentioned arbitration, which was, I think, in the month of November, 1847. The spike machine in question, patterns and all, were constructed in the factory and at the expense of the complainants, who, I think, also paid the expenses of taking out the patent. 263
The company paid all the expenses, except my personal services. I am acquainted with the patent and specifications of John F. Winslow and Thomas Osgood, contained in defendants' exhibit F, for a machine for making horse shoes, and the patent as taken out was entirely in-

f. 488) operative, and they stopped using it on that account. If I had had no patent for a machine for making horse shoes, I would not have given any thing for that patent. It was not for using the machine described in the last mentioned patent that I threatened to sue Winslow and Corning; they ceased using that machine, and then erected other machinery to crease and punch bars of iron for horse shoes on the plan of my patent of 1835, and it was for that I threatened to prosecute them.

f. 489) (All and every part of the testimony of this witness was taken subject to the general objections by the defendants' counsel, herein before set forth.)

H. BURDEN.

On his cross examination by the defendants' counsel this witness further says:

I sent my caveat to Washington by mail; I deposited a model of 264 my spike machine in the Patent Office at Washington on the same day I lodged my specifications there; that was a model of the whole machine, complete in all its parts, with pointing and bending lever attached. f. 490) This was on the 18th of April, 1839. The first trial of my machine was on common spikes, to see if they would point well. I have a model of the complete machine, (complainant's counsel undertakes to have the same in court on the trial or hearing.) The contract of December 2d, 1836, between me and the Troy Iron and Nail Factory is still in force. I supposed the defendants ceased making horse shoes six months before the 14th of October, 1845, as stated in my di- f. 491) rect examination, only because Mr. Corning then still continued purchasing horse shoes from me, and I saw a pile of horse shoes of their manufacture stowed away in their store on the dock, which were of only one sixe, and were unsaleable as I supposed because they 265 were buying horse shoes from me. I thing no person was present at the times alluded to in my direct examination, when pending the negotiation and settlement; Mr. Winslow assured me that he had not used my spike machine, and would not.

Q. Who received the money which was collected on the judgment recovered by you against the defendants?

Answer. I received it; it was paid to Judge Buel by the marshal, f. 492) who was prosecuted for it before it was collected. This, I think, was some time in the winter of 1843–'4. In my own memoranda I have credited the company with this money, and debited them with the expenses of the prosecution. One of the stockholders and trustees, that is, Mr. Backus, objected to charging the company with the expenses, claiming that, under the contract of 1836, I was bound to pay them. They were charged to the company, but a resolution was passed f. 493) that they should be charged to me, and that if it should be ascertained that it belonged to the company to pay them, then they should be recharged to the company. I do not remember when 266 this transaction occurred. I think this was one of the subjects in con-

troversy on the arbitration. This matter in regard to the expenses I think remains just as it was. At the time that suit at law was commenced by me in the circuit court of the United States against the defendants, of complainant's exhibit No. 1, as its record, John Town-
f. 494) send, Eleazer F. Backus, and myself, were the trustees of the complainant's company, and were then the only stockholders. On the 14th of October, 1845, John Townsend was a stockholder and trustee of said company; so was I, so was Eleazer F. Backus; whether there were then any other stockholders and trustees I cannot tell without looking at the books. On the 14th of October, 1845, I owned eight shares, being one-half of the capital stock. When the present suit
f. 495) was brought the stockholders were myself, Andrew White, Philip T. Heartt, and Peter A. Burden, and were all the trustees, and the only trustees, and I was president of the company, but am not now. I do not know whether any president has been elected. So far as I know, the same persons last above named are now stockhold- 267
ers and trustees, with the addition of James Roy; the latter owns three shares. I don't know when those shares were transferred to him, but I think recently and within a week; they were transferred to him by myself. Mr. Roy lives in West Troy. Andrew White, yesterday or
f. 496) the day before, sold his share of stock to Peter A. Burden, so I understood. I was paid by Andrew White by a check some day this week; he had previously given me his note for the stock, which I had placed in a Troy bank, and on receiving said check gave him an order for the note. The check was Peter A. Burden's check to Andrew White, for twelve thousand dollars, which was paid to me by Mr.
f. 497) White, on which I gave him said order. I have not presented that check at the bank for payment. Philip T. Heartt has not paid me his note for the stock I sold to him; I still hold the note. Peter A. Burden is about 26 or 27 years of age, upwards of 26 years. He is not an inmate of my family, and has not been, during the last three or four years, except when visiting. He has pursued the business of manufacturing iron and constructing machinery since he became 268
of age. He was in the employ of the Troy Iron and Nail Factory as
f. 498) foreman under a salary, until he went with Mr. Cameron three or four years ago. His salary, I think, commenced at a dollar and a half a day, and ended at fifteen hundred dollars a year. His salary while with Mr. Cameron was two thousand dollars a year. He was there a year and upwards. After leaving Mr. Cameron, Peter A. Burden was engaged in making plans for mills and selling patterns of my inventions in different parts of the country. I think he returned to the employ of the Troy Iron and Nail Factory on the 22d June, 1848, and was appointed agent for them, and has continued so ever since.
f. 499) His salary, I believe, has not yet been fixed. He paid me by notes for the stock I transferred to him. My age is 58 years; my profession for the last forty years has been principally mechanical, engineering, and manufacturing.

(It is here admitted by complainant's counsel, that no answer was

put into the bill in equity, contained in defendants' exhibit T; that before the time for answering expired, the controversy was submit- 269
f. 500) ted to arbitration as mentioned in defendants' exhibit H.)
I met Mr. Davidson at Boston, when I was about sailing for Europe, and had a conversation with him. The business of the Troy Iron and Nail Factory, while I was agent, amounted, I should think, to from a hundred and fifty to three hundred thousand dollars a year, but I cannot state particularly. The par value of the stock is six thousand dollars a share. We made hook-headed spikes for the Housatonic rail-
f. 501) road in 1846, and I understood the defendants did also, but I do not recollect that we divided the order with them; I do not know to whom or how the order came. I met Mr. Winslow and Mr. Corning in the private office of the latter in his former store in Albany. I do not know but Mr. Pruyn was in the counting-house of that store when we came out of the private office. I think he was, but am not sure.
f. 502) Mr. Pruyn was not then directed to draw any instruments to my knowledge.

H. BURDEN. 270

The defendants' counsel here gives in evidence a letter from Henry Burden to J. F. Winslow, dated September 4th, 1844, a copy of which, marked exhibit DD, is hereto annexed, to be read with the same effect as the original, the signature of Mr. Burden thereto being admitted.

Also a letter of the same date, by Peter A. Burden, to J. F. Winslow, a copy of which, marked exhibit EE, is hereto annexed, to be read with the same effect as the original, the genuineness thereof being admitted.

Also a letter, dated September 5, 1844, from Henry Burden to John
f. 503) F. Winslow, a copy of which, marked exhibit FF, is hereto annexed, to be read with the same effect as the original, the genuineness thereof being admitted. 271

Also a letter from the same to the same, dated September 12, 1844, a copy of which is hereto annexed, marked exhibit GG, to be read with the same effect as the original, the genuineness thereof being admitted.

Also a letter from the same to the same, dated September 29, 1844,
f. 504) a copy of which, marked exhibit HH, is hereto annexed, to be read with the same effect as the original, the genuineness thereof being admitted.

Also a letter from the same to the same, dated October 11, 1844, a copy of which is hereto annexed, marked exhibit II, to be read with the same effect as the original, the genuineness thereof being admitted.

Also a letter from the same to the same, dated January 2, 1845, a copy of which is hereto annexed, marked exhibit JJ, to be read with
f. 505) the same effect as the original, the genuineness of the same being also admitted.

Also a letter from the same to the same, dated January 6, 1845, a copy of which is hereto annexed, marked exhibit KK, to be read with the same effect as the original, its genuineness being admitted. 272

Also a letter from the same to the same, dated January 10, 1845, a copy of which is hereto annexed, marked exhibit LL, to be read with the same effect as the original, its genuineness being admitted.

Also a letter from the same to the same, dated January 13, 1845, a
f. 506) copy of which is hereto annexed, marked exhibit MM, to be read with the same effect as the original, its genuineness being admitted.

Also a letter from the same to the same, dated January 15, 1845, a copy of which is hereto annexed, marked schedule NN, to be read with the same effect as the original, its genuineness being admitted.

Also a letter, dated April 14, 1845, from the same to the same, a copy of which is hereto annexed, marked exhibit OO, to be read with the same effect as the original, its genuineness being admitted.

f. 507) Also a letter from the same to the same, dated July 8, 1845, a copy of which is hereto annexed, marked exhibit PP, to be read with the same effect as the original, its genuineness being admitted. 273

Also a letter from the same to the same, dated July 11, 1845, a copy of which is hereto annexed, marked exhibit QQ, to be read with the same effect as the original, its genuineness being admitted.

Also a letter dated July 12, 1845, from the same to the same, a copy
f. 508) of which is hereto annexed, marked exhibit RR, to be read with the same effect as the original; its genuineness being admitted.

Also a letter from Henry Burden to Erastus Corning, dated the 11th of August, 1846, a copy of which is hereto annexed, marked exhibit SS, to be read with the same effect as the original, its genuineness being admitted.

Also a letter from the same to the same, dated August 30th, 1845, a
f. 509) copy of which is hereto annexed, marked exhibit TT, to be read with the same effect as the original, its genuineness being admitted.

Also a letter from the same to the same, dated 24th February, 1844, a copy of which is hereto annexed, marked exhibit UU, to be read with the same effect as the original, its genuineness admitted.

Also a letter from Mr. Burden to Mr. Winslow, dated December 15, 1845, a copy of which is also hereto annexed, marked exhibit 274 VV, to be read with the same effect as the original, its genuineness admitted.

f. 510) Also a letter from the same to the same, dated October 9, 1846, a copy of which is hereto annexed, marked exhibit WW, a copy of which is hereto annexed, to be read with the same effect as the original, its genuineness admitted.

Also a letter from Mr. Burden to Erastus Corning, dated January 7, 1847, a copy of which is hereto annexed, marked exhibit XX, to be read with the same effect as the original, its genuineness admitted.

f. 511) Also a letter from Mr. Burden to E. Corning & Co., dated

April 1, 1847, a copy of which is hereto annexed, marked exhibit YY, to be read with the same effect as the original, its genuineness admitted.

Also a notice from John Townsend and counter notice from Henry Burden, dated respectively the 5th of August, 1847, and the 13th of August, 1847, a copy of which is hereto annexed, marked exhibit ZZ, to be read with the same effect as the originals, their genu- 275
ineness admitted.

f. 512) Also an assignment, dated May 18, 1844, by Elisha Tolls and Nathaniel B. Gaylord, a copy of which is marked exhibit AB; and another assignment of the same date, between the same parties, marked exhibit AC; copies of which respectively are hereto annexed, to be read with the same effect as the originals, their genuineness being admitted.

The counsel for the complainant in due time objected to all the exhibits above noted, from DD to AC, inclusive, as irrelevant to any of the matters in controversy in this suit; and those of said exhibits which f. 513) show that they were written pending and carrying on a negotiation for a settlement, are objected to on the further ground that whatever is said or written in negotiating or attempting to negotiate a settlement of any controversy is not admissible in evidence; and the exhibits were received subject to the said objections. 276

Helen Burden, wife of the said Henry Burden, a witness produced on the part of the complainant, being by me duly sworn, doth depose and say: (Before this witness was examined, the counsel for the de- f. 514) fendants objected that she was incompetent to become a witness, because she is the wife of Henry Burden, who they claim is a party in interest in this suit, and the evidence is taken subject to the said objections.) I have never been examined as a witness in any case; I remember the day my daughter Margaret was married, which was the 16th of December, 1847; Mr. Winslow, one of the defendants, was at our house either the night or night but one after her wedding; I heard a conversation between Mr. Winslow and Mr. Burden in regard to a controversy between Mr. Burden and Messrs. Townsend and others, f. 515) which was before an arbitration. The first thing Mr. Winslow said was, he asked Mr. Burden how he got along with his arbitration? Mr. Burden said he didn't get along at all; that it all amounted to the paper, and although he had assured the Messrs. Townsend that the paper was no license, still they persisted in going on. The first words Mr. Burden used referred to that paper which Mr. Burden had 277
given to Mr. Winslow on a settlement; he said that it was all concentrated in that which they persisted in calling a license. Mr. Burden said f. 516) that he had told the Messrs. Townsend that it was no license; that he never had given a license to any person, and if Mr. Winslow was using any thing belonging to the factory to prosecute him. Mr. Winslow said, that he was surprised that they persisted in calling that a license; it was no license; he never asked for a license, nor did he want one; if he had, he should have got it from some person other

than Mr. Burden, (mentioning the name of Mr. Townsend in this connexion, but I can't remember what he said of him,) as he always con-
f. 517) sidered his contract with the Troy Iron and Nail Factory binding. Mr. Burden and Mr. Winslow had some conversation as regards the hook-head machines. Mr. Burden said Mr. Stevens thought it a, distinct and separate machine. Mr. Winslow said Mr. Stevens must not take that course; that Mr. Burden must not allow him to take that course; that he, Mr. Winslow, thought it was not right; that he 278 always considered that Mr. Burden had sold himself, soul and body, as far as the spike business was concerned, to the Troy Iron and Nail
f. 518) Factory, and then entered into an explanation of it; that all he had invented, or all he ever would, so far as regards spike machines, justly belonged to the Troy Iron and Nail Factory, but remarked that he would like to see the contract again. Mr. Burden went up stairs for the contract; while Mr. Burden was up stairs, Mr. Winslow said I must not allow Mr. Burden to take that course, to make it appear a different machine, because it would militate against him. I said to Mr. Winslow, I did not know what we should do; they appeared to be
f. 519) determined to destroy our property. He said he did not think that they would succeed; he said that Messrs. Townsend proposed calling him to testify before the arbitrators; and as his testimony would go to clear Mr. Burden of the charges that they had brought against him, he preferred having them call him as their witness. After Mr. Burden came down with the paper Mr. Winslow read the contract carefully, or appeared to; he said it was a very strong instrument, and they 279 could not break it. Mr. Burden remarked that he was always satisfied
f. 520) with it, and perfectly willing they should have all the benefit of his inventions, as regards that thing. Mr. Winslow said he would give up that paper they called a license, but here in the room was not the proper place; when they called him as a witness before the arbitrators, he said he would explain the paper, and then there give it up.

The defendants' counsel objected, in due season, to all and every part of the evidence of Mrs. Burden, on the ground that it is inadmissible, because it tends to affect the construction of the instruments therein
f. 521) referred to; and the defendants will insist upon this objection, if the counter testimony of that kind produced by them should be rejected.

HELEN BURDEN.

On her cross examination by defendants' counsel, this witness further says: I have made an affidavit in this cause heretofore; in that affidavit I intended to state the same things in substance, but there was not as much in that affidavit as there is now. I have lately men- 280
f. 522) tioned to Mr. Burden, in part, what I have now testified to, not all of it. I have not frequently discussed that subject with him of late; he has often discussed the subject, but I knew it was injurious to him, and have lately said but little to him. He has not lately been well, and I thought it hurt him about it. I have not conversed with him

about this subject this week, with the exception that I told him what Mr. Winslow said to me while he was gone up stairs after the papers, except that there may have been a few words passed between us on this f. 523) subject; I cannot remember what, if any thing in particu- 281 lar; I cannot recollect that I have conversed with Mr. Burden within a fortnight, as to what Mr. Winslow said when he, Mr. Burden, was in the room with us. Mr. Burden has not told me, nor have I heard him say, what he has testified in this cause concerning that conversation with Mr. Winslow; I have not, at any time, heard Mr. Burden state what he was going to testify on that subject.

I remember Mr. Burden's going to Europe; I have no doubt I received a letter from him while he was in Boston, but do not remember; I do not know Mr. Davidson; I can't remember now about receiving f. 524) any letter, brought by Mr. Davidson from Boston. The conversation with Mr. Winslow lasted two hours, but there were other subjects of conversation. Mr. Winslow came up that evening; I met him in the hall and took him to the supper table, where this conversation occurred. William Burden, my son, was present; Mr. Burden, Mr. Winslow, and myself, were all I recollect, except a servant occasionally. I told Mr. Burden what Mr. Winslow said to me, and Mr. Burden said I had better testify; this was some time ago, I cannot f. 525) remember how long. Mr. Burden was gone to Europe, I 282 should think, from three to four months, but I am not positive at all, and I should not like to say.

HELEN BURDEN.

And now, on this 15th day of June, 1849, to which this examination of witnesses is continued by counsel—

Henry Burden, being re-examined by complainant's counsel, subject to the same objection, in all respects, as were taken to his first direct examination, says: On the evening of the 13th instant I sold all my stock in the complainant's company; I then sold and transferred my f. 526) last five shares of said stock; this sale and transfer was before my cross examination, and Mrs. Burden's examination taken yesterday. I transferred it to Peter A. Burden.

The counsel for defendants objects to this evidence as insufficient to render the witness competent, on the ground that the assignment cannot be proved by fraud. 283

The witness further says: I now swear and depose that all the testimony before given by me in this cause is true. I find, by an examination of the books of the company, that my statement of the owner- f. 527) ship of stock given yesterday, being made from memory, was incorrect. The paper now presented to the commissioner contains a true statement of the stockholders of the Troy Iron and Nail Factory, and the amount of stock held by them respectively, in the years 1841, 1845, 1847, and in 1848, after the 5th of July, and on the 14th of June, 1849, and that the stock now remains as stated on the last above date; which paper is hereto annexed, marked complainant's exhibit No. 7.

f. 528) The terms I referred to, to the defendant Winslow, in my letter, being exhibit LL, that I might at some future time grant him a license upon, were, that he, Winslow, should make a regular application to me, recognising my right to said patent, for a license, and that I would give him an answer after consulting my associates. Mr. Winslow always contended that I had no right to the invention, and that he did not want a license. There was a serious domestic 284 misunderstanding between members of Mr. Winslow's family and of f. 529) my family, during the years 1844 and 1845, which were not of a pecuniary or business character, and that were independent of the suit that was then pending.

H. BURDEN.

On his cross examination by defendants' counsel, this witness further says: I sold the stock to Mr. Roy for twelve thousand dollars a share; he paid me for it by notes; the transfer was absolute. The notes were payable at 3, 6, and 9 months, or 6, 9, and 12 months, I am not certain which; I took no security, but took his own name alone on the notes; the notes are at my house in my possession. Mr. Roy did not f. 530) hypothecate the stock to me. I took Peter A. Burden's note or notes for the last five shares of my stock; I sold this last stock for ten thousand dollars a share, with interest from the first of July last added in the note or notes. Peter A. Burden took this stock at the same price I gave to the Townsends and others for stock, with the 285 interest added. This was an absolute sale to Peter A. Burden, with security. I took his notes, with no other name on the paper but Peter A. Burden's; I do not remember when the note or notes of Peter were f. 531) payable; I do not remember the month; I think it is within a year, but can't recollect certainly; these notes are also in my possession at my house.

A copy of a letter from Mr. Winslow's letter book, dated January 7, 1845, is here read to this witness, purporting to have been addressed by Mr. Winslow to the witness; and the witness being asked whether f. 532) he received that letter, answers: I remember receiving a letter containing a part of the contents of this copy, and for aught I know or can remember, the whole, as the original letter is destroyed. A copy of the letter from said book is hereto annexed, marked exhibit A D, to be read with the same effect as the original, and the said book is also marked by me, "Azor Taber, Albany, June 15, 1849," to be produced and used, subject to all legal objections on the trial. 286

On another copy, letter from Mr. Winslow to Mr. Burden, being f. 533) read to the witness from the said letter book, the witness is asked whether he received this letter? to which he answers that he cannot remember; he may have received it, but cannot recollect, as he believes all the correspondence on that subject addressed to him has been destroyed; a copy of the last mentioned letter is hereto annexed, marked A E, to be read on the trial, subject to all legal objections. I cannot tell when I destroyed these letters. On being asked by the

counsel for the complainant, witness says, these letters have not been recently destroyed.

H. BURDEN.

f. 534) It is admitted that the spikes for the Housatonic and Harlem railroads, respectively, made by the two respective companies, were hook-headed spikes.

Now, on this 16th day of June, 1846, Andrew White, a witness, is produced on the part of the complainant, and being by me duly sworn, doth depose and say: 287

(Before this witness was sworn, the counsel for the defendants objects to the witness as incompetent, on the ground of interest, it appearing, as is claimed by said counsel, that he is a stockholder in the com-
f. 535) plainant's company; the complainant's counsel claims that it appears by the evidence already taken that he is not such stockholder.) On the 12th day of June, 1848, the witness, together with Mr. Burden, called on the defendant, Mr. Winslow, at his counting rooms at his works; immediately after Mr. Burden and myself left the defendants' works, Mr. Burden presented me with a paper, containing part of the conversatiou that took place while we were there, and asked me if I had any objections to sign it. I said no; signed it, and handed it
f. 536) to him. I then, during the day, made a statement in my memorandum book of the conversation, as I understood it, and have now both these statements. The conversation, as I took it down from memory, and as I understood it, was as follows: "Memorandum: Called at Mr. Winslow's this morning in company with Mr. Burden, to arrange about the price of puddling; when Mr. Burden introduced the subject of settlement of suit against Winslow & Company, dated 14th 288 day of October, 1845, asking Mr. Winslow whether he considered that he obtained any right to use any machinery vested in said Burden
f. 537) or the Troy Iron and Nail Factory. Mr. Winslow replied that by the agreement neither party surrendered any of their rights." There was a good many words passed on the subject that I did not take down. I did not undertake to put down every word, but the substance of what was said on this subject. The only object for which I called on that occasion, and which object constituted a part of the conversation, was to fix upon the price to be paid to puddlers; I had no other object in calling, and knew of none; I was at that time the agent of the Troy
f. 238) Iron and Nail Factory, and my object was to fix upon a uniform price to be paid to puddlers in all the factories, to which Mr. Winslow's consent, he being agent of the defendants' factory, was necessary. When I took down the statement above given of the conversation 289 at the defendants' factory, I intended that it should contain the whole substance of the conversation on the subject, and now believe it does contain it.

(Defendants' counsel objects to the whole of the testimony of this
f. 539) witness in due time, on the same grounds as the objections taken to the testimony of Henry Burden, herein before stated.)

Q. by complainant's counsel. Are you now the owner of any of the stock of the Troy Iron and Nail Factory?

Answer. I am not a stockholder in the Troy Iron and Nail Factory.

ANDREW WHITE.

On his cross examination by defendants' counsel, this witness further says: I really never held any stock in fact; I never paid a dollar for any of the stock of this company, and never received a dollar on f. 540) it. Mr. Burden, I think, requested me to go to Mr. Winslow's office; we went there on the 12th June, 1848, but I am not positive. Mr. Burden handed me the statement of his, as I have above mentioned, after we had got up to the office of the Troy company, where we 290 went together, where we wrote it, and told me that it would be wanted to use some day. That statement of Mr. Burden's contained nothing on the subject of puddling; we did not talk of the puddling after we left Mr. Winslow's office. I used my own memorandum when I f. 541) testified on my direct examination; I referred to that. My own memorandum differs in words from that which I signed and gave to Mr. Burden.

I presume I made an affidavit in this cause on the 11th of August last; I remember of making an affidavit before Deodatus Wright, esq., and cannot remember the time, but it was a very warm day, and I presume it was about that time; I cannot remember the contents of it. A paper purporting to be a copy of said affidavit, which is admitted by the counsel for the complainant to be a true copy of the original, being f. 542) shown to witness, he says that the statement [therein given as follows: "Albany, June 12, 1848, I called upon Mr. Winslow, in company with Henry Burden, in relation to the puddling. When 291 in conversation, Mr. B. exhibited the written paper of preference, (meaning the agreement of 14th October, 1845,) and Mr. Winslow went into an explanation of the grounds upon which the paper was given, saying that neither party compromised their rights in any way by the exchange of their papers," is, in said copy affidavit, stated to be f. 543) the statement written by him, but is in fact, as he now finds, the statement written by Mr. Burden, and signed by him, the witness herein above mentioned, and which was handed to him by Mr. Burden as a statement of what took place between them at Mr. Winslow's office.]

The complainant's counsel in due time objects to the testimony commencing with the words "the statement," and ending with the words "Winslow's office," included above in brackets, on the ground that its only legitimate office can be to contradict Mr. Burden, and no final action has been laid for this evidence, by interrogating Mr. Burden on that subject. 292

f. 544) This witness further says, in answer to the question: Can you now state whether Mr. Winslow used in that conversation the words "neither party surrendered any of their rights," or the words, "neither party compromised their rights?" That he, the witness, cannot state

from memory anything that took place in relation to this subject, but speaks exclusively from his memorandum, and from the one signed for Mr. Burden. I was agent of this company about ten months, I believe; I was present when the stock held by Mr. Townsend and others was f. 545) transferred to Mr. Burden, and he gave his notes on the purchase, and my impression is that, in case these notes were not paid, the venders of it had a right to re-enter and take the whole stock of the company, by virtue of a pledge or hypothecation of the stock to secure the notes.

ANDREW WHITE.

On his re-examination by complainant's counsel, this witness further says: I remember of receiving an assignment in substance like defendants' exhibit J in this cause, and of giving a note in substance like f. 546) defendants' exhibit K. On one day this week I transferred the share of stock therein mentioned to Peter A. Burden—this was 293 Monday last; Peter A. Burden, on that occasion, gave me his check for twelve thousand dollars on the bank of Troy. I gave that check to Mr. Henry Burden, and he gave me an order on the bank of Troy for my note, which I got upon the settlement of the controversy between Mr. Burden and Mr. Townsend and others; Mr. Backus transferred his three shares of stock to Mr. Peter A. Burden. The whole stock then f. 547) transferred by Townsend, Backus, and others, was partly paid by notes of other persons and money; the balance, forty-five thousand dollars, was paid by the joint and several notes of Henry Burden and Peter A. Burden, or notes made by Henry Burden and endorsed by Peter A. Burden. On looking at exhibit J, witness says he is satisfied they were joint notes as above mentioned.

(The counsel for defendants objects to the whole of the above re-examination of this witness, on the same ground as his first direct examination, stated at length to the evidence of Henry Burden.) 294

ANDREW WHITE.

f. 548) On his further cross examination by the counsel for the defendants, this witness further says: That he does not know that Mr. Peter A. Burden paid any of the above mentioned notes of other persons, or money, on the occasion of the above settlement; and he does not believe that he did, because he did not see him do so.

ANDREW WHITE.

On his further re-examination by complainant's counsel, this witness says: Peter A. Burden was present during that transaction; whether he was present during the whole time I do not remember; I think I was f. 549) so situated that Peter A. Burden could not have paid any money without my knowing it, nor furnished in any way any portion of the fund without my knowing it.

ANDREW WHITE.

And now, on this 18th day of June, 1849, to which this examination of witnesses is adjourned by mutual consent, John Townsend, a 295 witness produced and duly sworn on the part of the complainants, doth depose and say: I was president of the Troy Iron and Nail Factory from and prior to 1841, to some time in the month of June, 1848; we f. 550) had in our factory a machine, patented in 1840 to Mr. Burden, for making hook-headed spikes, and we made the hook-headed spikes on these machines, of which we had several, until I sold out in 1848; I am acquainted with the defendants' factory, down below ours; until about the month of August, 1847, I did not know or hear that the defendants were using this machine, though I knew they were making f. 551) hook-headed spikes. I recollect of giving a deed, as president, to Mr. Corning for a portion of the dock, (which it is conceded was one undivided half part;) I considered the one half of that dock cheap at fifteen hundred dollars; it cost us more, but I consented it should be sold for that. The sale of that dock was not connected with any other matter or transaction to my knowledge, other than to avoid complaints and difficulties in the use of the dock in the course of the business. 296

(This testimony was in due time objected to by the counsel for the f. 552) defendants, on the ground stated at large in relation to the testimony of Mr. Burden to the same subject matters.)

JOHN TOWNSEND.

On his cross examination by the counsel for the defendants, this witness further says: I resided at Albany during the time I was president, and the conduct of the factory I left entirely to the agent; as to the Albany Iron and Nail Works, I did not know what machinery they did use, until some months before the second of August, 1847, when we had a meeting; and prior to this meeting some months, we had f. 553) heard that that company were using our machines for making hook-headed spikes. When we sold out our stock of the company to Mr. Burden, we took security on all the stock of the company for the payment, and still hold that security. I knew the Albany company 297 had been making hook-headed spikes for several years for sale, but not that they had made them with our machine, until the time above mentioned.

JOHN TOWNSEND.

Defendants' further testimony.

James Roy, a witness produced on the part of the defendants, being by me duly sworn, doth depose and say: I reside at West Troy; I am the person to whom Mr. Burden transferred some stock of the Troy Iron f. 554) and Nail Factory; I have not the transfer of the stock with me; it is in the possession of Judge Buel, of Troy; I left it there at the time it was drawn, which was Monday or Tuesday morning last—I forget which, but think it was Monday. I left it there, because it was there that the business was transacted; I thought little of it at the time, and had no wish to take it. That morning Mr. Burden called on me, which

f. 555) was the first conversation I had with him on the subject; it was a little after five o'clock; I had been over to our factory in West 298
Troy, and returned to my house. Mr. Burden came to my house and stated to me he wished to dispose of three shares of stock of the Troy Iron and Nail Factory, and as we were in the iron business it would probably be a good investment. I said I would want to think about it a few minutes. Before any more conversation took place which I remember, I went into the house and got my overcoat, as it was chilly, and f. 556) he wanted me to go over to Troy. On my return with my coat he stated to me that he was president of the Troy Iron and Nail Factory, and it would be necessary for him to dispose of what stock he had, to divest himself of his interest, before he could give evidence in some suits, or words to that effect; that in my buying the stock it would be a bona fide transaction, but if I wished, there would be no difficulty in his finding me a purchaser for it again. I think I remarked, that we f. 559) had better abstain from any further conversation about it till we got to Troy, and heard what Judge Buel said about it; and we did so abstain generally. After some little delay he found Judge Buel, 299 and I went with Mr. Burden to Judge Buel's office; Mr. Burden there stated to Mr. Buel that he had sold me three shares of the stock, and wanted him to draw an assignment of transfer of it. Mr. Buel then drew the assignment, Mr. Burden signed it, and Mr. Buel witnessed it. f. 558) Mr. Burden then requested Mr. Buel to draw three notes for the purchase money for twelve thousand dollars each, with interest, payable to his order at three, six, and nine months from date. The judge drew the notes and I signed them. I think that completed the transaction; there was nothing more occurred important, as I do not remember any thing particular. As we rose to go, Judge Buel asked, what shall I do with these papers? I said, retain them; Burden said the same. Then Mr. Burden said he would take the notes, and did so, and f. 559) I requested Judge Buel to keep the transfer. We left immediately after the papers were signed. When Mr. Burden said, if I wanted to sell the stock again there would be no difficulty in his finding a purchaser for it, I think I made remarks from which he must have understood that I did not want to hold it, but should want to part 300 with it in a short time; he said that I should not lose anything by it. On coming out of Judge Buel's office we parted; I suppose I am legally bound to pay those notes if I am able; but I do not expect to pay f. 560) them; I expect the stock will be taken back from me by some one, and the notes of course given up; but there is no agreement to that effect; I believe by an investigation in the books the other day that the capital stock of the company was originally ninety-six thousand dollars, being sixteen shares of six thousand dollars each; I made that investigation the morning after the transfer; I went to the office of the Troy Iron and Nail Factory with Mr. Phillip T. Heartt; I went there that morning; Mr. Burden's carriage came for me to my house in West f. 561) Troy; I went in that carriage to Troy, found Mr. Phillip T. Heartt, breakfasted with him, then went with him to the factory, and

there found Mr. Burden; I do not know who is now the president of the company, nor who is the secretary; yes, I do; I think Peter A. Burden is, for he showed us the books and a statement of the property of the company. My impression is, his name was appended to 301
the last annual statement of the company; I do not know who is the treasurer of the company; I think Peter A. Burden is agent, and has
f. 563) the general superintendence; I think so, because in all the correspondence we have had with him as Roy & Co., he has signed as agent; I do not know how many operatives we have in the factory; I have taken no active part in the concern; I did not examine matters closely, and don't know the value of the stock on hand; I believe I am one of the trustees of the company, which is all I know; I do not know who the others are; I was elected one of the trustees on the afternoon of the same day I got the stock; I was elected in the office; there was
f. 563) a meeting of the stockholders that afternoon, Mr. Burden sent for me, and I went over and attended it; I do not know whether Mr. Burden is a stockholder now or not; I do not know the names of all the stockholders; I own three shares, Phillip T. Heartt one, and Mr. Burden's son some stock; I should think the transactions of the election closed about four o'clock.

JAMES ROY. 302

On his cross examination by complainant's counsel, this witness says:
f. 564) I presume I have a right to keep that stock or sell it as I please.

JAMES ROY.

Defendants' exhibit A.

Agreement made this fourteenth day of October, 1845, between Henry Burden of the one part, and Erastus Corning, James Horner, and John F. Winslow, of the other part: Whereas, a suit is now pending in the circuit court of the United States, for the northern district of New York, in favor of the said Henry Burden, against the said Corning, Horner, and Winslow, arising out of the alleged violation and infringement of a patent right claimed by said Burden for the making
f. 565) of spike, both parties claiming the right to make said 348 spike; it is now agreed between the said parties that the said suit shall be and is hereby discontinued, each party paying their own costs; and it is further agreed, that the said parties may each hereafter manufacture and vend spike of such kind and character as they see fit, notwithstanding their conflicting claims to this time; and the said John F. Winslow claiming as patentee to have the right, for the benefit of the said Corning, Horner, and himself, to manufacture the patent horse
f. 566) shoe, and the said Henry Burden also claiming such right exclusively, it is severally agreed by said Corning, Horner, and Winslow, that said Burden may manufacture said patent horse shoe, and that said Corning, Horner, and Winslow will not manufacture them; and each party, in consideration of the premises, hereby releases to the

other or others all claim, demand, and cause of action, by reason of any violation of the patent rights claimed by them as aforesaid to the date hereof.

Dated October 14, 1845. 349

H. BURDEN.

(Endorsed.) United States Patent Office. Received this 21st day f. 567) of August, 1848, and recorded in Liber S 1, of Transfers of Patent Rights.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

EDMUND BURKE, [L. S.]
Commissioner of Patents.

Exhibit B.

The Troy Iron and Nail Factory, by Henry Burden, their agent, duly authorized, in consideration of fifteen hundred dollars to be paid to them by Erastus Corning, of the city of Albany, as hereinafter mentioned, do hereby agree to sell to the said Erastus Corning, by release f. 568) and conveyance, with covenants against their own acts, the undivided one-half part of certain premises, which the said company agree they now hold and own, known as their wharf property in the town of Greenbush, in the county of Rensselaer, near the southerly bounds of the city of Troy, bounded on the east by the Troy and 350 Greenbush railroad, on the west by Hudson's river, on the north by the northerly line of the old dock or wharf of said company, and extending thence southerly along Hudson's river one thousand feet, with the wharves thereon, and all the rights and appurtenances thereto be- f. 569) longing; and the said Erastus Corning may at once take possession of and use said premises so agreed to be sold and conveyed to him, and any claim for the first use thereof by said Corning, or the Albany Iron and Nail Works, is hereby discharged. The said Erastus Corning agrees to pay said Troy Iron and Nail Factory the sum of one thousand five hundred dollars for said premises, with interest from this day, on delivery of the deed thereof.

Dated October 14, 1845.

H. BURDEN, *Agent.*

Exhibit C.

f. 570) To all to whom these presents shall come, greeting: 315

Know ye, that I, Anson Little, clerk of the circuit court of the United States, for the northern district of New York, in the second circuit, having inspected the records of my office, do find there on file a certain bill, affidavit, and notice, and order for an injunction, in the words and figures following, that is to say:

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

To the judges of the circuit court of the United States, for the northern district of New York:

Henry Burden, of Troy, in Rensselaer county, in the northern district of New York, and a citizen of said State, complains and brings
f. 571) his bill against Erastus Corning and James Horner, both of Albany, in Albany county, in said northern district of New York, and citizens of said State, and against John F. Winslow, of Troy, 352 aforesaid, and also a citizen of said State; and thereupon your orator complains and says, that in the year 1838 he completed an invention and an improvement upon a spike machine, by which could be made a hook-headed spike, sometimes called a brad-headed spike, which was then called for and used principally for fastening down a T rail in rail-
f. 572) roads; that your orator was about two years completing this improvement and testing it by experiments, which were expensive and took much time; that in the spring of 1839, after he had by many experiments fully proved the utility of this improvement, your orator made application to the Patent Office, to the Commissioner of Patents, for a patent for his said improvement, by petition and with a specification describing said improvement, and paid the sum of thirty dollars, as the law requires, and did all that was requisite on his part to obtain a patent; that soon after his application, sundry persons set up claims
f. 573) at the Patent Office to the same invention and improvement, insisting that they were the prior inventors, and the defendants also set up that said invention and improvement was not new, but known to them and used by them before your orator made said application 353 for a patent, of all which the said Commissioner of Patents gave your orator notice, and also of the time and place of hearing him, and all the other parties objecting to the grant of said patent; and after hearing all the parties objecting, said commissioner awarded in favor of your orator, and thereupon issued a patent to your orator for said improve-
f. 574) ment, which patent is and was in due form of law, and was duly signed, sealed, and dated the second day of September, 1840, and in all respects duly authenticated and delivered, as will more fully appear by said letters patent ready in court to be produced, in and by which letters patent was granted unto your orator, his heirs, administrators, and assigns, the sole and exclusive use and benefit of said invention and improvement, for the term of fourteen years, from the second
f. 575) day of March, 1840, all in due form of law; that in the specification annexed to said patent, and making part of the same, the said improvement is fully and correctly set forth, which consists 354 in the application of a bending lever, to bend the head of the spike, in connexion with the dies and machinery, to form and complete the hook-headed or brad-headed spike, as will more fully appear by said specification and patent when produced, whereby your orator became the sole and exclusive owner of said improvement, and had the

sole and exclusive use thereof; that by means of said improvement your orator was able and ready and willing to supply the public with
f. 576) said spikes, at a fair and reasonable price, and did so, until prevented by the unjust and wrongful interference by the defendants, herein afterwards more fully stated.

And your orator further showeth unto your honor, that the defendants were fully informed of your orator's claims under said patent; yet the defendants, disregarding his aforesaid claims and rights derived from his said invention and improvement and said patent, soon after the date thereof, erected one or more spike machines for making the said hook-headed spike with a bending lever, and all the improvements secured to your orator by said patent, attached to and connected with the said
f. 577) machines by the defendants so as aforesaid erected, and 355 put in operation to manufacture said hook-headed spikes; and that the defendants, by use of said bending lever, and the improvements so as aforesaid secured to your orator by said patent, commenced manufacturing said hook-headed spikes; and that the defendants, since the date of said patent, have, by the use of said improvements, manufactured and sold large quantities of said spikes, the exact amount of which your orator is ignorant, but hath been informed and believes, and so charges the fact to be, that the defendants have, by the use of said improve-
f. 578) ment, since the date of said patent, manufactured and sold about one hundred tons of said spikes, of the value of about eleven thousand five hundred dollars, the profits of which your orator hath been informed and believes, and so charges the fact to be, amounted to about five thousand dollars, all which the defendants have received, and most unjustly deprived the complainant thereof. 356

And your orator further showeth unto your honors, that soon after the defendants had commenced the use of said improvement, and the
f. 579) manufacture of said spikes by the use of the same, he commenced a suit against them before said circuit court, for having infringed said patent, in which suit the defendants were charged by your orator with using said improvements for making hook-headed spikes, and with having manufactured and sold several tons thereof, contrary to law and the rights secured to your orator by said patent, and without his license or consent; that upon the pleadings in said cause the same was brought to trial at Albany, at the October term of said court,
f. 580) in the year 1842, on which trial the defendants set up as grounds of defence that your orator was not the first and original inventor of said improvement, and that the same was known to and used by the defendants long before your orator invented the same; and that said patent was void on the ground that the same was illegally obtained, and that, after a full hearing before said court and jury, a verdict was found by said jury in favor of your orator, and for seven hundred dollars damages; that the defendants thereupon, upon a case made at 357
f. 581) the last June term of said court, moved to set aside said verdict, and for a new trial, and, after a full hearing, said court denied said motion, and rendered judgment in favor of your orator for the amount of

said verdict with costs, all which will more fully appear by the files and records of said court, to which for greater certainty your orator prays leave to refer. And your orator further showeth unto your honors, that in said suit, and upon trial thereof, it was fully established by said verdict, and the judgment of said court thereon, that your orator was the
f. 582) true and first inventor of said improvement, for which he had lawfully obtained said patent, and that the same was valid in law; and that the defendants, by the use of said improvement in the manufacture of said hook-headed spikes, infringed upon and violated said patent and the rights of your orator secured thereby; yet the defendants continued the manufacture of said spikes by the use of said improvement, as hereinbefore set forth, and threaten to continue the same in defiance of the rights of your orator and the judgment of said court, to the 358 great wrong and injury of your orator.

And your orator believes and charges that the defendants, by the use of his aforesaid improvement, so as aforesaid secured to your ora-
f. 583) tor by said letters patent, have been benefitted and made profits and a gain, over the old method of manufacturing spikes, to the amount of five thousand dollars, for which sum the defendants are, in equity and good conscience, accountable to your orator, as he verily believes and charges, but which your orator most respectfully submits to the judgment of your honors.

And your orator further showeth unto your honors, that he hath
f. 584) made application to the defendants, through their counsel, to come to a just and equitable account for the use of his said improvement in the manufacture of said spikes, and pay to your orator the profits made thereby, with which reasonable request the defendants have wholly neglected and refused to comply. 359

To the end, therefore, that the defendants may have due notice of this his bill of complaint, and that they may render their account in the premises, and true, full, and perfect answers make to the following interrogatories, upon their respective oaths, and according to their respective knowledge, information, and belief, namely:

First. State how many hook-headed spikes the defendants have
f. 585) made and sold, or made and now have on hand unsold, by the use of the aforesaid bender, and the improvements claimed by your orator in his aforesaid patent, since the commencement of the aforesaid suit, in which said verdict and judgment were rendered in favor of your orator?

Secondly. Answer and state when and to whom said spikes were sold, and for what price or prices the same were sold, and in whose hands the said spikes are which remain unsold?

Your orator prays that a subpœna may be issued out of said court,
f. 586) summoning the defendants above named, viz., Erastus Corning, James Horner, and John F. Winslow, to appear and answer to said bill; and that the defendants may answer said interrogatories 360 and render their account in the premises, and pay to your orator what may be found due to him upon such accounting, and what damages he

hath sustained by reason of the aforesaid infringements of his aforesaid patent, and do and suffer what may by said court be adjudged and decreed in the premises; and that your honors would grant unto your f. 587) orator a writ of injunction, restraining the defendants, their servants and agents, from all and any further violation of said patent, and from the infringement of any of the rights and privileges secured to your orator thereby, and that your honors would grant unto your orator any other and further relief in the premises, to which in equity and good conscience he may appear to be entitled to. Each and every of the defendants is required to answer the interrogatories in said bill numbered one and two.

All which is most respectfully submitted to your honors, by

f. 588) HENRY BURDEN.
SETH P. STAPLES,
Of counsel for complainant.
J. B. STAPLES,
Solicitor. 361

NORTHERN DISTRICT OF STATE OF NEW YORK, *ss.*

On this sixteenth day of September, in the year 1843, before me personally appeared the above named Henry Burden, and made oath that he has read the above bill by him subscribed, and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters which are therein stated to be on his information and belief, and as to those matters he believes it to be true.

CHAS. HOOPER,
Clerk of Rensselaer county, N. Y.

(Endorsed.) Circuit court of United States, for northern district
f. 589) New York; Henry Burden vs. Erastus Corning, &c. Bill filed Oct. 2, 1843.

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York. 362

HENRY BURDEN
vs.
ERASTUS CORNING, JAMES HORNER, and JOHN F. WINSLOW. } Bill in equity.

Henry Burden, the complainant, having been duly sworn, deposeth and saith, that he doth verily believe that he was the first and the original inventor of the improvement by him described and claimed in his
f. 590) patent, set forth in said bill of complaint, for making the brad or hook-headed spike; and that he first brought the same into successful operation; that soon after he invented and brought into operation his aforesaid improvement, the defendants, without the consent, and contrary to the mind and will of the deponent, took from his factory the aforesaid improvement, and immediately thereafter appropriated the same

to their own use in their own factory, and by the use thereof commenced making, and made, a large quantity of said brad or hook-headed spike, in violation of the right secured to this deponent by said patent. That
f. 591) for such violations of his aforesaid rights, this deponent 363 commenced a suit in law before said court, against the above named defendants, which said suit was brought to trial before said court at the October term thereof, in 1842, and after a labored trial before said court and jury, a verdict was given in favor of this deponent against all said defendants; upon which, after a full hearing of the defendants, on motion for a new trial, judgment was given upon said verdict for this de-
f. 592) ponent, which judgment is now in full force, hath been paid and satisfied by the defendants, as will appear by the record on files of said court, as this deponent hath been informed and believes; and the deponent further saith, that the defendants, after said trial and said verdict and judgment in favor of the deponent, and after the filing of his said bill of complaint, the defendants ceased to use this deponent's improvement, and discontinued the making of hook-headed spikes for a considerable time, as the deponent has been informed and believes; but this deponent saith that, within some short time past, the defendants have
f. 593) again resumed the manufacture of hook-headed spikes by the use of his aforesaid improvements, and in violation of this deponent's rights secured to him by his aforesaid patent, and to his very great 364 detriment. And further saith not. H. BURDEN.

Subscribed and sworn to before me, this 13th day of November, 1844
WILLIAM MIX,
Clerk of the county of Albany.

(Copy.)

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York.

HENRY BURDEN
vs.
ERASTUS CORNING, JOHN F. WINSLOW, and JAMES HORNER. } Bill in equity.

To Ira Harris, esquire, solicitor for the defendants in the above entitled cause.

f. 594) Please to take notice, that a motion will be made in the above cause before the honorable Alfred Conklin, district judge of the 365 United States, for the northern district of New York, and one of the judges of the circuit court of the United States, in and for said district, to be heard at the chambers of said judge at Auburn, in said district, on the 20th day of November, 1844, at 10 o'clock in the morning, for an order for an injunction to be grounded in said cause, to restrain the de-
f. 595) fendants from infringing the patent set forth in said bill according to the prayer thereof, which motion will be founded upon said bill, a

copy of which hath been heretofore served, and upon the affidavit of the complainant, a copy of which is herewith served; and upon the record of the cause tried between the same parties, in an action for infringing the same patent, now remaining in said court, in which a verdict and judgment were given in favor of the complainant.

JOHN B. STAPLES,
Solicitor for the complainants.

New York, Nov. 11, 1844.

CIRCUIT COURT OF THE UNITED STATES,
For the northern district of New York. 366

HENRY BURDEN
vs.
ERASTUS CORNING, JOHN F. WINSLOW, and JAMES HORNER.

f. 596) NORTHERN DISTRICT OF NEW YORK, *ss.*

Henry Burden, of Troy, in said district, being duly sworn, says: That he did on the 13th day of November, instant, serve a copy of the above affidavits, and a notice of which the above is a copy, upon S. O. Shepard, esq., law partner of Ira Harris, esq., who is the solicitor for the defendants in this cause, by delivering the same to said Shepard, personally, at the office of the said Harris and Shepard, the said Harris being at the time absent from said office. HENRY BURDEN.

Subscribed and sworn this 20th day of November, 1844, before 367
A. CONKLING.

f. 597) CIRCUIT COURT OF THE UNITED STATES,
For the 2d circuit and northern district of New York.

At a court of equity held for the circuit court of the United States, for the second circuit and northern district of New York, at Auburn, in said district, on the twentieth day of November, one thousand eight hundred and forty-four. Present, honorable Alfred Conkling, district judge for said district.

HENRY BURDEN
vs. 368
ERASTUS CORNING, JOHN F. WINSLOW, and JAMES HORNER.

John B. Staples, complainant's solicitor.

f. 597) On reading and filing the bill of complaint in this cause, and the affidavit of Henry Burden, the above named complainant, and proof of service of a copy of said affidavit, and notice of motion for this order, upon Ira Harris, the solicitor for the defendants in this suit; and after hearing Mr. David Wright, of counsel for said complainant, no one appearing on behalf of said defendants, and due deliberation being

thereupon had, on motion of said counsel for said complainant, it is ordered that an injunction issue in this cause against the above named defendants, their servants and agents, according to the prayer of said bill, until the further order of this court.

f. 599) NORTHERN DISTRICT OF NEW YORK, *ss.*

And I, Anson Little, clerk as aforesaid, do hereby certify, that the foregoing copies of a bill, affidavit, and notice, and order for injunction, have been compared by me with the originals on file in my 369 office, and are correct transcripts therefrom, and of the whole of such originals. And I further certify, that the foregoing are copies of all the proceedings had in the above entitled suit.

f. 600) In testimony whereof, I have hereunto subscribed my name, [L. S.] and affixed the seal of the said circuit court, this eighth day of May, one thousand eight hundred and forty-nine.

ANSON LITTLE, *Clerk.*

Exhibit D.

Re-issue, No. 78.

The United States of America, to all to whom these letters patent shall come:

Whereas, Erastus Corning and James Horner, Albany, New York, have alleged that William Osgood and Ebenezer Hunt have invented a new and useful improvement in the machine for making wrought iron spikes and nails, (the said William Osgood and Ebenezer Hunt having assigned their right, title, and interest in the same to said Corning and Horner,) for which letters patent were granted, dated March f. 601) 14th, 1834, which letters patent are hereby cancelled, on account of a defective specification, which they state has not been known or used before said Osgood and Hunt's application; have made oath that they are citizens of the United States; that they do verily believe that said Osgood and Hunt were the original and first inventors or discoverers of the said improvement, and that the same hath not, to the best of their knowledge and belief, been previously known or used; have paid into the treasury of the United States the sum of fifteen dollars and presented a petition to the Commissioner of Patents, signif. 602) fying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Erastus Corning and James Horner, their heirs, administrators, or assigns, for the term of fourteen years, from the fourteenth day of March, one thousand eight hundred and thirty-four, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the

words of the said Corning and Horner, in the schedule hereunto annexed, and is made a part of these presents.

f. 603) In testimony whereof, I have caused these letters to be made [L. S.] patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this fifteenth day of January, in the year of our Lord one thousand eight hundred and forty-six, and of the independence of the United States of America the seventieth.

JAMES BUCHANAN,
Secretary of State.

Countersigned and sealed with the seal of the Patent Office.
EDMUND BURKE,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.

To all to whom these presents shall come:

f. 604) Be it known, that Ebenezer Hunt and William Osgood, both of Troy, in the county of Rensselaer, and State of New York, have invented a machine for making wrought nails and spikes, a true and accurate account of which is as follows, reference being had to the accompanying drawings which form a part of the same: Fig. 1 being an isometrical view; fig. 2 a central section between the die-boxes; fig. 3, A, is a side elevation of the die-box; fig. 3, B, elevation of the f. 605) working end of movable die-box. The nails are to be manufactured from rods, either rolled or slit; but rolled rods are preferable, and the size of the rod must correspond with the size of the body of the nail. The points of the nails may be either flat or sharp, but flat points are made most advantageously by our machine. The nail rod is put into the machine hot, and the piece to form the nail is cut off and gripped, and immediately after is pointed and headed, both at the same time.

f. 606) The form of this machine may be so varied in its detail that no description can be given which will comprehend all the varieties of which it is susceptible, but it is the modes of operation which form the ground-work of this invention, which several operations are as follows: first, cutting off the piece of rod for the nail, and gripping it; second, the hammering, and thereby forming the point; third, the heading; which two last are performed, as above stated, nearly at the same time; fourth, the disengaging the nail, and opening the gripe to receive the rod for the next nail or spike.

f. 607) The foundation or bed plate of this machine is a flat, strong plate or frame of cast iron, (*a*) of such shape, and with such upward and downward projections, as to accommodate the operating parts hereinafter to be specified. This is shown in fig. 5.

The apparatus for performing the first operation, viz., cutting off and gripping, consists of two compound blocks, one of which is fixed and the other movable; these are composed of several parts, hereinafter described.

f. 608) The fixed or stationary blocks for assisting to gripe the rod, (see fig. 2,) is attached to the frame at one end thereof, and may consist of three plates, placed horizontally one upon the other. The two lower plates are of a width exactly equal to the length of the body of the nail. The thickness of the bottom one (*b*) is unessential, say from three-fourths of an inch to an inch and a half.

The middle plate (*c*) must exactly correspond in thickness with the size of the body of the nail, and must be of steel, or of wrought iron, with steel on the inner end, or of some other substance equally hard.

f. 609) The inner end of this middle plate forms one side of the cavity in which the nail is held for heading and pointing. The third or top plate (*d*) of the fixed block is wider and longer than the other two, and the end it projects over the other, and forms the upper side of the square cavity in which the nail is gripped. A cross view of this die is shown in fig. 3, with the movable die open, or drawn back from it; here the spike is shown in red lines.

There is a movable or sliding block (*e*) which we denominate the die-box, composed of a piece of cast iron, consisting of three sides of a

f. 610) square, with a bottom, which bottom is a little (say one-fourth of an inch) lower than the bottom of the bottom plate of the fixed block above named.

The cavity of the sliding block or die-box (*e*) is occupied by two plates, the bottom one of which is also in two pieces, which are not fastened together, but are placed side by side. The width of the widest piece (*f*) fig. 3, B, corresponds with the length of the body of

f. 611) the nail, and that of the narrowest piece (*g*) with the taper or point of the nail, which is about one-third of the width of the widest piece.

The widest of these pieces (*f*) projecting under the middle plate of the stationary block, and fitting closely to it, forms the body of the cavity which grips the body of the nail; and the narrow piece (*g*) also projecting under, forms the bed on which the point of the nail is formed; and the top of this last mentioned piece is shaped by grinding or otherwise, so as to form the die or angle of the point of the nail or spike; (see elevation A, in fig. 3;) the length of the plates is at right

f. 612) angles to the position of the nail. On the compound plate (*f g*) last specified, lies another plate (*h*) of the same width as the plate (*f*) under it, and is about an inch, more or less, in thickness; but the inner end, say about one inch of its length, is reduced to the exact thickness of the middle plate (*c*) of the block stationary opposite; and when the die-box (*e*) is forced upward, and the bed plate (*f*) passes under the

f. 613) opposite middle plate, (*c*,) and the thin end of the plate (*h*) last specified, forms three sides of the cavity or chamber in which the nail

is gripped, and the third or top plate (*d*) of the fixed block forms the upper or fourth side of the grip.

As the die-box is forced inward to grip the nail, the forward end of it is raised, just before it stops, by little inclined planes (*i*) on each side of the die-box, fixed in the frame, up which the die-box slides in order to grip the nail on each of its four sides.

On the front end of the main bed plate (*a*) is the cutter block, (*k*,) made fast, at the outer end, to said bed plate, in a place made to receive f. 614) it, and it is made secure by a dove-tail wedge. The inner or operating end of said cutter block (*k*) is exactly where the rod is cut off at the point of the nail, which is effected by the movable die passing said cutter in gripping the nail.

When the rod is thrust in to form the nail, the further end, which is to form the head, strikes against a spring gauge, (*l*,) the opposite end of which is fastened to the bed plate and the cutter, (*h*,) which is at- f. 615) tached to it, and moves with the die-box, coming up against the cutter block, (*k*,) the piece which is to form the nail is thereby cut off and gripped by the moving up of the die-box, and is ready to form the head and point.

When the nail is cut off it is carried forward by the die-box until the back end, which is to form the head, passes by, and is clear of the gauge spring (*l*) above mentioned, and the front end, which is to make the point, is just passed, but even with the back edge of the cutter f. 616) block, (*k*,) at this instant commences the operation of heading and pointing.

The header is a solid bar of cast or wrought iron, or other proper substance, (*m*,) say from eighteen inches to two feet in length, and from three to four inches square, lying horizontally and lengthwise of the machine, in proper sliding ways, so that the header die, which is inserted in the forward end of the header, may be exactly opposite the f. 617) projecting end of the rod which is to form the head of the nail.

A strong lever (*n*) of cast or wrought iron, bent nearly at right angles, with one end or arm longer than the other, is so placed that the short arm, which at its end forms the fulcrum, is connected by a strong movable or articulating joint to two downward projections (*o*) from the under side of the bed plate, and the other or longer end of said lever rests upon a cam (*p*) on the main shaft (*q*) which lies across the back end of said plate or frame; while the angular point, or elbow, stands against the back of the header; and the end of said lever being f. 618) raised by said cam, the header with its die is forced forward, and forms the head of the nail, and when so formed the header is carried back by a spring (*r*). That part of the heading die which comes in contact with the end of the spike rod may be so shaped as to give any required form to the head of the spike.

f. 619) The point is formed by two hammers, (*s s'*) each hammer being operated by a lever, (*s''* and *u*) in the following manner: the top hammer stands in an angle with the nail of about forty-five degrees, retained therein by the guide (*d''*) in combination with guides

(*d*) and (*d'*) as hereinafter described, so that when it strikes the nail the stroke corresponds with the extension of the nail forwards.

The upper end of this hammer is connected by a knee joined to a strong lever, (*s''*) which lever rests at about one-third of its length on two fulcrum posts (*t*) strongly attached to the bed plate, (*a*,) and the f. 620) opposite or longest end of which lever rests on the periphery of a wheel, (*t'*) with four (more or less) cams or projections on its edge, which gives as many successive strokes to the point of the nail. And the periphery of this cam wheel is so adjusted as to advance the hammer a little at each successive stroke, as the point of the nail diminishes.

The lower end of this hammer, or that part which comes in contact with the bar to form the point of the nail, is guided by passing down f. 621) through a space cut out of the upper die (*d*) for that purpose, and bearing against a guide (*d*,) fastened in front of it to the frame, it being regulated laterally by another guide, (*d''*) that bears against its side, and is also fastened to the frame, as clearly represented in the drawing.

The side hammer (*s'*) when used lies horizontally in such a situation as to strike against the side of the point of the nail, but strikes it at right angles with the nail, and the lever (*u*) which operates it lies on the bed f. 622) plate (*a*,) and has for its fulcrum a pin standing on the same, and receives its motion from side cams, or undulations on the side of a cam wheel (*t'*) last above specified.

The die-box or sliding block (*e*) above specified is advanced inward to grip the nail by a wedge (*v*) operating horizontally behind the outer end of said die-box, which wedge is driven forward by a cam (*w*) on the end of the main shaft, in shape nearly semicircular, and so adjusted as to perform its operations in about half the time of each revolution, leaving the grip open half of the time to re-enter the rod for the f. 623) next nail. The die-box, like the header, is carried back by a spring.

As the die-box comes back and the grip is opened, the above mentioned gauge spring serves, when necessary, to disengage the nail; and in case it should fail, it may be aided by a hook, which is attached to the die-box, and drawing back with it against the head of the nail, disengages it, if not done before. We have sometimes used, especially in making square pointed nails, what we term a forcing slide, which is f. 624) a small instrument, operating by the side of the cutter block in such a manner that when the piece for the nail is cut off, this forcing slide, operating by levers and a proper cam, &c., forces the piece back so as to leave room for the point to remain clear of the cutter block; and when this is used the gauge spring may be dispensed with, but this is not material.

All the operating parts of the gripping, heading, and cutting apparatus, which require it, are to be made of or faced with steel, and suitably hardened.

f. 625) What we claim as the invention of the said William Osgood

and Ebenezer Hunt, and desire to secure by the re-issue of these letters patent, is the combination of the dies, constructed substantially as herein described, with the united heading and pointing apparatus so as to grip the rod on four sides nearly its whole length, while heading and pointing, by giving the movable die a compound motion upward and forward, all as above specified.

We also claim the combination of the pointing hammers, operating f. 626) by progressive cams, and directed by the guides (*d d' d''*) for pointing the nails, with the supplemental plate (*g*) in the sliding die-box, to form one side of the point, constructed and arranged substantially in the manner and for the purpose herein set forth.

ERASTUS CORNING,
JAMES HORNER.

Witnesses—JNO. M. B. DAVIDSON,
H. W. TURNER.

No. 4043.—*Exhibit E.*

The United States of America, to all to whom these letters patent shall come:

Whereas, John F. Winslow and Israel Blanchard, Troy, New York, have alleged that they have invented a new and useful improvement in the machine for making hook or brad-headed spikes, which they state has not been known or used before their application; have made oath f. 627) that they are citizens of the United States; that they do verily believe that they are the original and first inventors or discoverers of the said improvement, and that the same hath not, to the best of their knowledge and belief, been previously known or used; have paid into the treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

f. 628) These are therefore to grant, according to law, to the said John F. Winslow and Israel Blanchard, their heirs, administrators, or assigns, for the term of fourteen years, from the tenth day of May, one thousand eight hundred and forty-five, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Winslow & Blanchard, in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

[L. S.]

f. 629) Given under my hand at the city of Washington, this tenth day of May, in the year of our Lord one thousand eight hundred and forty-five, and of the independence of the United States of America the sixty-ninth.

JAMES BUCHANAN, *Secretary of State.*

Countersigned and sealed with the seal of the Patent Office.
EDMUND BURKE, *Commissioner of Patents.*

The schedule referred to in these letters patent, and making part of the same.

Be it known, that we, John F. Winslow and Israel Blanchard, of Troy, in the county of Rensselaer, and State of New York, have in-
f. 630) vented a new and useful improvement in the spike machine patented by Hunt & Osgood, in March, 1834, and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which fig. 1 is a representation of the improvement for turning the heads of spikes; fig. 2 a modified tool for the same purpose; fig. 3 is a side elevation of Hunt & Osgood's machine prepared for our apparatus; fig. 4, a plan f. 631) of said machine; fig. 5, an elevation opposite to fig. 3; fig. 6, sections showing the heading process.

The nature of our invention consists in adding an improvement to the dies of Hunt and Osgood's machine, so as to bend the spike by them, before forming the head, by which the machinery is simplified, and the operation expedited.

The construction is as follows: the machine being represented as now in use, in the figs. 3, 4, 5, in which (*a*) is the frame of suitable dimensions, at one end of which the dies are placed, formed in two parts, the f. 632) upper one (*b*) of which is stationary, and the lower one (*c*) slides; this is inclosed in a box (*c''*) in which the plain piece of steel (*c*) is fitted, having the proper form of the spike at the inner end, that slides laterally under the upper die, when moved by a wedge, (*d*) this is connected with the cam shaft, (*e*) besides the above named steel (*c*) our improvement is fitted into the box, (*c''*) it is a bar of steel (*f*) shown more clearly in figs. 1 and 2, (the second fig. being a modification of the first.) In forming hook or brad-headed spikes, the heads of which f. 633) are in a transverse direction with the edge of the points, we use the tool shown at fig. 1; it is a straight bar as thick as the steel plate (*c*) above named, with a projection (*f*) above its upper surface at the inner end, the side of which next the plate (*c*) is concave, as represented in the figures. The rod from which the spike is made is fed into the machine in the usual way at (*g*,) and its end, of which the head is to be formed, lies upon and projects a little beyond this f. 634) raised surface (*f*) as shown at A, fig. 6, and as the die-box advances, it also raises up towards the upper stationary die (*b*,) which latter holds the rod down against the lower plate (*c*,) and the end of the spike rod is bent upwards (see B, fig. 6,) before being acted upon by the header as at C, this piece (*f*) also forms a portion of the die for forming the back part of the head, as represented in sections, fig. 6. If the points of the spikes are to be reversed in relation to the heads from f. 635) those above described, we introduce the tool, fig. 2, (in place of fig. 1,) into the moving die-box; this has the form on the inner end,

and the rod is fed in past its end, end on one side instead of over it, as in the first instance; this, as the die-box advances, turns the end of the rod to one side, as the dies close and gripe the rod, when the spike is headed as in the first instance. It will be observed that the above described tools are particularly adapted to the spike machine known as f. 636) "Osgood & Hunt's machine," the parts and combinations of which are such as to enable us to use the improvement herein described in forming hook-headed spikes, and its use or application is limited to said machine, and such other machines, the gripping and heading parts of which are substantially the same as said Osgood and Hunt's machine.

What we claim, therefore, as our invention, and desire to secure by letters patent, is the above described tools for forming hook-headed spikes, and their application to said Osgood & Hunt's spike machine, which tools are so formed that, when introduced into the movable die- f. 637) box of said machine, a projection is given to the dies, so that that part of the rod of which the head is to be formed receives the requisite bend in the operation of gripping as herein described, when the header described in Osgood & Hunt's specification of March, 1834, advances and completes the head.

JOHN F. WINSLOW,
his
ISRAEL ⋈ BLANCHARD.
mark.

J. KNOWLSON,
D. BEATTIE,
Witnesses.

No. 3217.—*Exhibit F.*

The United States of America, to all whom these letters patent shall come:

f. 638) Whereas John F. Winslow and Thomas Osgood, Troy, New York, have alleged that they have invented a new and useful improvement in machines for forming horse shoes, chain links, &c., which they state has not been known or used before their application; have made oath that they are citizens of the United States; that they do verily believe that they are original and first inventors or discoverers of the said improvement, and that the same hath not, to the best of their knowledge and belief, been previously known or used; have paid into f. 639) the treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said John F. Winslow and Thomas Osgood, their heirs, administrators, or assigns, for the term of fourteen years from the eleventh day of August, one thousand eight hundred and forty-three, the full and exclusive right

and liberty of making, constructing, using and vending to others to be f. 640) used, the said improvement, a description whereof is given in the words of the said Winslow and Osgood, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed. [SEAL.]

Given under my hand at the city of Washington, this eleventh day of August, in the year of our Lord one thousand eight hundred and forty-three, and of the independence of the United States of America the sixty-eighth.

A. P. UPSHUR,
Secretary of State.

Countersigned and sealed with the seal of the Patent Office.

HENRY L. ELLSWORTH,
Commissioner of Patents.

f. 641) *The schedule referred to in these letters patent, and making part of the same.*

Be it known that we, John F. Winslow and Thomas Osgood, both of the city of Troy, in county of Rensselaer, and the State of New York, have invented a new and useful machine for making horse shoes and bending the links for chains; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification, in which fig. 1 is a perspective view. Fig. 2 is the bed plate f. 642) detached, and shows also the lever which works the under die or former (*c*) in its relative position with the bed plate. Fig. 3, side levers attached to part of the sliding frame. Fig. 4, dies for creasing and punching the shoe in an inverted position, with the lever D affixed thereto. Fig. 5, the lever which is placed under the bed plate having the lower dies or "former" attached. In each of the figures like parts are designated by the same letters of reference.

The machine is constructed of cast iron, the moving parts being sus- f. 643) tained by an oblong frame A raised on four legs. In this frame a bed piece B is affixed, a more clear delineation of which is shown in fig. 2; on each of the back corners of this bed piece are two guides (*e*) which have their inner faces curve inward for a purpose hereafter named, at the hinder ends; near the front end of the plates a U formed projection rises in the centre, of which there is a similar formed hole through the plate, which is filled by the former (*c*); the f. 644) sides of this former being the proper shape for a horse shoe or link of chain. To the lower end of the former a lever G (see fig. 5) is jointed, which extends back to a fulcrum about its centre; it there rises up a little above the bed plate, the fulcrum is attached to the bed plate underneath, and is not shown in the drawing. Near the rear end of the bed piece two posts K are attached, one on each side, to the

frame; these serve for bearings to a shaft (*l*) from which a curved arm
D' extends back and down to a cam E', hereafter described; in the
f. 645) centre of the shaft (*l*) an arm projects forward, which is con-
nected with a link (*m*) that couples it with the punch (*n*), which punch
is affixed to the end of a lever D on an axle D'' which has its bear-
ings in the short posts K, attached to the sides of the frame just behind
those marked K. At the front end of the frame are two guides (*g g*),
and behind the post K' are two similar guides (*g g*); in these four
f. 646) guides a sliding frame F moves back and forth, by means of a
pitman H jointed to its back cross-bar which connects it with a sunk
crank on a shaft E, the bearings of which are at the extreme end of
the frame. To the front cross-bar of the sliding frame two side levers
(*c*) are jointed at (*ff*); these levers lay between the sides of the sliding
frame and extend a little below it, being thicker than the side. These
levers are more clearly shown at fig. 3. Each of them has two hori-
f. 647) zontal mortices in it, the forward one being the longest, and
in its forward end is placed a friction roller (*b*); the hinder mortice is
filled with a friction roller (*d*). When the parts of the machine are in
place, loose ends of these levers lay between the guide pieces (*e*) affixed
to the bed piece against which they are borne by the springs (*c*, fig. 1),
the rollers (*d*) only touching said guide pieces. On the frame A, just
f. 648) forward of the posts K, there is a rest (*a*) where the bar of iron is
fed in; one side of this rest has a cutter (*a'*) of steel attached to it, and
to the sliding frame F there is another cutter (*f*), between which the
bar is brought; the bar is then passed through the slats in the levers
behind the rollers (*b*) and in front of the former (*c*); the sliding frame
F is then drawn back by the revolution of the crank on the shaft E,
the cutter (*f'*) comes in contact with the bar and cuts it off, and the
two ends are bent round the former by the rollers (*b*), the levers (*c*) at
the same time being forced inward as they advance by the curves (*e*)
f. 649) on the bed piece, and set the bar of iron up the former (*c*); the
cam E' on the shaft E then strikes the tail of the lever D' and forces
down the punch (*n*), which completes the shoe; the punch at the same
time forcing down the former (*c*) and freeing the shoe from it, the
former is brought back into place by lever G striking the frame F; the
punch is raised by a spring (*o*) attached to the tail of lever D, which
brings it down. The shaft E has a balance wheel I on it, and is
f. 650) turned by any motive power. The iron is rolled out suitable
for the article to be manufactured; and when it is hot it is fed into the
machine. It will be observed that it will receive a form correspond-
ing mainly to that of the inclined guides (*e*) on the bed piece and the
former (*c*); hence if a horse shoe is to be made, these should be pre-
pared to suit its particular figure; if the link of a chain is to be formed,
the curves must correspond to its form.

What we claim as our invention, and desire to secure by letters pa-
f. 651) tent, is the combination of the levers (*c c*), constructed and ar-
ranged as herein set forth with the former (*c*) in the manner and for
the purpose herein described. We also claim, in combination with

the above, the sliding frame, having a cutter attached as before specified.

JNO. F. WINSLOW,
THOS. OSGOOD.

Witnesses—
HIRAM TAYLER,
H. V. W. MARTIN.

Exhibit G.

In the supreme court of the State of New York. In equity.

THE TROY IRON AND NAIL FACTORY
vs.
HENRY BURDEN.

f. 652) To the supreme court of the State of New York, in equity, humbly complaining, the Troy Iron and Nail Factory, a corporation created under the laws of this State, show and state, that, on the twentieth day of July, in the year 1835, Isaiah Townsend, John Townsend, Eleazer F. Backus, Ebenezer Irving, James Swords, and Josiah Converse, filed in the office of Secretary of State of this State a certificate in writing, which had been theretofore signed and acknowledged by them, as required by the act relative to incorporations for manufacturing purposes, passed March 22, 1811; in which certificate it was stated that the said associates were desirous of incorporating themselves for the purpose of establishing a manufactory of nail-rods, hoop-iron, f. 653) cut nails and spikes, and forming and making all kinds of machinery, tools, and implements, and wares, made, used, or improved in and about manufactories established for such purposes; that the corporate name should be the Troy Iron and Nail Factory; that such manufactory was to be continued and established in the city of Troy, in the county of Rensselaer; that the capital stock of the said company should be ninety-six thousand dollars, divided into sixteen shares of six thousand dollars each; that the number of trustees of the said company should be six, and that Isaiah Townsend, John Townsend, Eleazer F. Backus, James Swords, Ebenezer Irving, and Josiah Converse should be the trustees of the said company for the first year. And thereby the said associates became and were duly incorporated under the act aforesaid, and the several acts continuing and amending the same; and under and by virtue of the said acts, they, said associates and successors, from the time of filing the said certificate, have been, and still are, a body politic and corporate; and the business of the said corporation, as expressed in the said certificate, has been during that time carried on f. 655) and conducted by the said associates and their successors.

And these complainants further state and charge, that, at a meeting of the trustees of the said corporation named in the said certificate, held on the eleventh day of August, in the year 1835, John Townsend was elected by them president of the said company, and by-laws for the

regulation of the said company were established, by which, among other things, it was provided that the election for trustees should be held annually on the first Tuesday of August, in each year; "that, as soon as may be convenient after such election, the said trustees should f. 656) convene and choose one of their number to be the president of said company, who should hold his office until the next election of trustees; that, at such meeting, the said trustees should appoint an agent or superintendent, who should, as such, also be the secretary and treasurer of said company, and a clerk. The president should call and preside at all meetings of the trustees; and in case of his absence a president pro tem. should be appointed. It should be the duty of the f. 657) president to preserve order, and present for the consideration of the trustees all matters connected with the business of the company which may come to his knowledge; and he should sign the minutes of every meeting, after the same shall have been approved of by the trustees; and he should sign all certificates of stock held in this company, and as often as any transfer may be made, he should sign new certificates for such stock, upon the transfer being properly entered in a book to be f. 658) provided for that purpose, and a surrender of the old scrip. It should be the duty of the secretary to record in a proper book, to be provided for that purpose, the proceedings of the said trustees, and to countersign the proceedings of each meeting after the same should have been approved of by said trustees, and should also countersign all certificates of stock. The general duty of the agent or superintendent should be to take the charge, custody, and control of all the real estate of said company, and keep the same in good order and repair; and also the f. 659) charge and care of the personal property of said company, consisting of the stock on hand, wrought or unwrought, and of all the tools, implements, and appurtenances thereunto in any manner belonging; and generally to superintend and direct all the operations of said company at said factory, and also of the workmen employed in and about the same; it should be his duty to cause to be entered in proper books, to be kept at the store and by the clerk thereof, all the articles purchased f. 660) by him, stating the quantity, price, credit, and from whom purchased; and it should also be his duty, at the place and by the said clerk, to keep a true and correct account of all articles manufactured at said Troy Iron and Nail Works; and also of all articles sold, stating to whom, the quantity, the price, and term of credit if any; and that he should be considered the general agent to make purchases and sales, with the advice and consent of the president of the company; to make promissory notes for purchases so made, payable at such times and places as he may have stipulated for; and to take from purchasers promissory notes for any articles sold, payable to him as such agent, and f. 661) to endorse the same for the purposes of discount, or otherwise connected with the business of the said Troy Iron and Nail Works.

It should be the duty of said agent to employ such and so many workmen in the several departments of said factory as may be profitable and advantageous to said company, at such wages as should

be fair and reasonable and usual for the services in which they may be engaged; to suspend or dismiss from employment such as cannot be advantageously employed or should misbehave; and, if necessary, to employ others in their stead.

f. 662) It should be his duty in each week on Saturday to make out a list containing the names of the persons employed in said factory, the number of days and parts of days they should respectively have worked, and their daily or weekly wages; which list, signed by said agent and delivered to the clerk of the store, should be his warrant to pay to the persons whose names are contained in said lists the sums to which they may be respectively entitled, for which he should take from each person a proper receipt or voucher.

f. 663) That if the said clerk should not have sufficient money for the payment of such wages, it should be the duty of the agent to draw his check payable to the order of such clerk for the amount required. The said agent should every day deposit in the bank, with which this company may transact its banking business, and to his credit as such agent, all moneys received or collected by him for or on account of said company; and he should also deposit in said bank for collection all notes or bills received in the ordinary course of business, and all moneys drawn by him from said bank should be by check signed by him as f. 664) such agent, payable to the order of said clerk, and endorsed by him, and regularly entered in the margin of said check book, showing the amount, date, and for what and to whom payable; but the said clerk should also enter the same in proper books to be provided for that purpose, and kept by him at the store.

The said agent should also pay for all goods, wares, and merchandise purchased by said clerk for said store, and in the margin of the check book should be stated the date, amount, and person to whom the money is payable; and all such payments should be by checks on said bank, and not otherwise.

f. 665) It should be the duty of the agent at every general meeting of the stockholders to render a full and true account of the operations aad doings of said factory for the preceding year; which statement should contain a true account of the stock on hand at the previous meeting, wrought and unwrought; the quantity of the several articles made or manufactured; the quantity of each sold, designating the sales for cash or on credit, and to whom; the quantity of wrought or un- f. 666) wrought materials then on hand; the amount of cash received, and from whom, and the amount credited, and to whom; the amount paid for wages, and the amount of the contingent expenses.

In all cases of more than ordinary moment, it shall be the duty of the said agent or superintendent, previous to any commitment, to consult with the president, and receive his sanction to the course to be pursued; and, as often as may be practicable, to confer with the said president and trustees relative to the affairs of this company and the execution of his f. 667) duties as such agent. The salary of such agent should be the

sum of , payable quarterly, and should be paid by check on said bank, payable to and endorsed in the manner above mentioned.

It should be the duty of the clerk to take the charge of the store at the factory; to make all purchases on account of and for the store, so as at all times to have on hand a general assortment of such goods, wares, and merchandise as are usual and will probably be wanted by the f. 668) workmen and others who may trade at the store; to make proper entries of all such purchases in proper books to be kept at said store, and of all cash received for goods sold.

It should be his duty once a year, and at the said general meeting of the stockholders, (and also when thereunto required by the trustees,) to render a true and full account of all his purchases and sales for and on account of said store, the value of the goods then on hand, and the profits of the store for the preceding year.

f. 669) In the purchase of the goods for the store, the clerk should exercise his own discretion as to the kind and quantity of the goods, wares, and merchandise wanted; but, in all other respects he should be subordinate to and aiding and assisting the agent, and especially in the keeping of the books and accounts and whatsoever may appertain thereto.

And these complainants further charge and state, that the preceding statement of the substance of the said by-laws is made from a draft of said by-laws, now in the possession of John Townsend, president of f. 670) the said company, and which is believed to correspond with the said by-laws as adopted and entered in the book of minutes of the trustees *of the trustees* of the said corporation; which book of minutes is now in the possession of Henry Burden, the defendant hereinafter mentioned, the same having been borrowed by him of the said John Townsend, and he having refused to deliver the same to the said John Townsend, president as aforesaid, or to the trustees of the said corporation.

And these complainants further state, that, in consequence of their inability to have access to the said book of minutes, they are not able f. 671) to set forth the particulars of all the proceedings had at the meetings of the trustees of the said corporation, held subsequently to the said first meeting; but they state and aver that, at all the annual meetings of the trustees of the said company, held after the annual election of the said trustees, the said John Townsend has been chosen president of the said company, or has been continued as such president by resolutions to that effect, passed by the said trustees; and that, from the time of his first appointment as herein stated, the said John Townsend has acted and be*ing* recognised as such president by the trustees and stockholders of the said company until this time, and particularly by the said f. 672) Henry Burden; and further, that, in or about the month of September, in the year 1818, Philip Ford was appointed clerk of the said company, by a resolution of the trustees thereof, at a regular meeting; and that at all the annual meetings of the said trustees, held immediately after their election from the said time of his first appointment to this time, the said Philip Ford has been duly appointed or continued as

such clerk by resolutions of the said trustees, and has, during all that
f. 673) time, acted and been recognised as such clerk by the trustees of the said company and the stockholders thereof, and particularly by the said Henry Burden, until on or about the eleventh day of August, 1847, when the said Burden attempted to discharge the said Ford, and prevented his performing the duties of his said office as hereinafter stated.

And further, that, on or about the twenty-sixth day of January, in, the year 1831, Henry Burden was, by the trustees of the said Troy
f. 674) Iron and Nail Factory, appointed agent or superintendent of the said company, and continued to act as such agent or superintendent until the sixth day of August, 1842, when, at an adjourned meeting of the trustees of the said corporation held on that day, the following proceedings took place :

"At an adjourned meeting of the trustees of the Troy Iron and Nail Factory, held at their works on the 6th day of August, 1842. Present, John Townsend, president; E. W. Backus, Ebenezer Irving, and Henry Burden.

f. 675) "Mr. Henry Burden laid before the board a communication, in which he declines serving the company as agent at the salary now fixed by the board. The board, not deeming it to be the interest of the company to allow a larger salary to the agent, adopt the following resolutions:

"Resolved, That Mr. Henry Burden be, and he is hereby, discontinued as agent for this company.

"Resolved, That the president, Mr. John Townsend and Mr. E. F. Backus, are hereby appointed a committee to take charge of the interests of the company; and, as soon as may be, to procure a proper and capable person to take charge of, and conduct the concerns thereof, during the ensuing year, and for such compensation as may be agreed upon.

f. 676. "On motion, the meeting adjourned.

(Signed) "JOHN TOWNSEND, *President.*

"EBENEZER IRVING, *Acting Secretary.*"

And these complainants further represent and state, that the committee named in the last resolution of the meeting aforesaid, within a few days after the passage of the same, did procure and agree with the said Henry Burden, and he, the said Henry Burden, did agree with the said committee, to take charge of and conduct the concerns of the said company for the then ensuing year, under and by virtue of his said employment by the said company, at a salary of two thousand dollars for the year.

f. 677. And these complainants state and charge, that the said Henry Burden thereupon ceased to be the agent or superintendent of the said corporation, contemplated and described in the said by-laws; and they further state and aver, that no appointment of the said Henry Burden as the agent or superintendent, contemplated and described in the said by-laws, has been made by the trustees of the said company at any

time since his employment as aforesaid by the said committee; and that the said Henry Burden has, since the expiration of the year for which he was so employed as aforesaid, and until the 3d of August, 1847, f. 678) continued to perform the same acts and duties which he performed during the said year, without any renewal of the engagement aforesaid, and without any contract or agreement whatever, either with the said committee, or with the trustees of the said corporation, or with any other committee, officer, or person, authorized in behalf of the said company to make any such agreement.

And these complainants further state and show, that for more than three years past Ebenezer Irving, James Swords, and Josiah Converse f. 679) have ceased to be owners of any shares of the capital stock of the said company. That the said Henry Burden claims to be the owner of eight shares of the said capital stock; that these complainants believe the said Burden has a legal title to four shares in the said capital stock, but whether he has any valid and vested title to any more shares these complainants have no certain knowledge.

And these complainants further state, that Eleazer F. Backus owns and has a valid title to three shares in the capital stock of said company; which he has owned and held from the time of the aforesaid re- f. 680) newal of the incorporation thereof.

And these complainants further state and show, that on the second day of August, 1847, and from that time to the present, John Townsend was and has continued to be the owner of two shares in the capital stock of the said company; and Isaiah Townsend, Franklin Townsend and Henry H. Martin, were, and have each of them continued to be respectively, owners of one share in the capital stock of the said company, and each of them was, on the said second day of August, 1847, f. 681) and has continued to be, until the filing of this bill, a stockholder in the said corporation. That the firm of Isaiah and John Townsend originally owned five shares in the capital stock of the said corporation as co-partners in trade; that the said Isaiah Townsend departed this life in the year 1837, and that the said John Townsend, as surviving partner of the said firm, previous to and on the 2d day of August, 1847, distributed and divided three of the said five shares as follows: f. 682) one to Isaiah Townsend, and one to Franklin Townsend, sons of the said Isaiah Townsend, deceased, and one to Henry H. Martin, a son-in-law of the said Isaiah, deceased, and surrendered the certificates of the said five shares of stock held by him as such surviving partner, and on the 2d day of August, 1847, took out a new certificate for two shares of the said stock in his own name, and caused certificates severally to be issued to the said Isaiah Townsend and Henry H. Martin, on the 14th of August, 1843, of their respectively being entitled to f. 683) one share in the said Troy Iron and Nail Factory; and on the 2d day of August, 1847, caused a similar certificate to be issued to Franklin Townsend, of his being entitled to one share in the said Troy Iron and Nail Factory; all which certificates were signed by the said John Townsend, as president of the said company, and were cut out of

a book of such printed certificates, used for the purpose of entering transfers of stock in the said company, and were delivered to the said
f. 684) Isaiah Townsend, Franklin Townsend and Henry H. Martin, at the times of the issue thereof respectively; and entries of the issues of the same respectively, specifying the names of the assignors and of the assignees, were made at the times of the said issues, in the margin of the said book, opposite the certificate so cut out.

And these complainants state and aver, that the said printed book of blank certificates, with the margins thereof, is, and from the organization of the said company to this time has been, the only book in which actual transfers of the stock of the said company have been originally
f. 685) entered. That the said company was first organized and incorporated on the 15th day of January, 1814; and the said book and the printed certificates of stocks therein were formed and devised in relation to such original organization, and have always been used for the purpose of entering and completing the transfer of the stock of the said company; that the said book has usually, especially for the last ten years, been kept in the business office of the said president of the said company, viz., the said John Townsend, and entries of transfers of
f. 686) stock have been made in the said book there, and in no instance has the entry of such transfer been made, or certificates of stock been issued or signed, at any other office or place during the time aforesaid.

And these complainants further state and show, that on the third day of August, 1847, being the first Tuesday in August, an election for six trustees of the said company was duly and legally had and held at the business office of the said company, at their factory in the city of Troy,
f. 687) pursuant to a notice for that purpose, published daily during week days, from the 10th of July to the 3d of August, 1847, in the Troy Daily Whig, a newspaper believed to be nearest the place of business of the said company, stating that the said election would be held at the said place, at 12 m. on the said day, and which notice, these complainants charge, came to the personal knowledge of the said Henry Burden more than a week previous to the time of the said election.

And these complainants further state and show, that the said Henry
f. 688) Burden was present in the office where the said election was holding, and knew that the same was then holding, and some time after 1 o'clock in the day was notified that the poll of the said election would be closed in 15 minutes; that John Townsend, Eleazer F. Backus, Isaiah Townsend, and Franklin Townsend, stockholders in the said corporation, attended the said election and voted by ballot for six trustees of the said company; and that upon counting and canvassing the votes given at the said election, it was found and declared that John Townsend, Eleazer F. Backus, Henry Burden, Henry H. Martin,
f. 689) Isaiah Townsend, and Franklin Townsend, were duly elected trustees of the said company for the ensuing year; and a minute of the said election was duly entered in the book of minutes of the proceedings of the stockholders and trustees of the said company.

And these complainants further state and show, that immediately after

the result of the said election was declared, a meeting of the trustees elected was agreed by those then present to be held on the succeeding day, at 10 o'clock, a. m., at the business office of the company in Troy, f. 690) and notice thereof was given to the said trustees, except Henry H. Martin, who was absent in some part of the State unknown to the other trustees, and such notice was sent in writing to the said Henry Burden on the said third day of August, and, as these complainants are informed and believe and charge, was received by him on that day, and also that the said Henry Burden was verbally notified at the request of the said trustees, on the said third day of August, of such meeting of said trustees.

And that pursuant to such agreement and notice a meeting of the f. 691) trustees of the said company, so elected as aforesaid, was held on the 4th day of August, 1847, at the business office of the said company in Troy, in the forenoon of that day, at which a quorum of the said trustees necessary for the transaction of business was present, and at which John Townsend was unanimously appointed president of the said company for the ensuing year, and Franklin Townsend was appointed secretary pro tempore. That the said Henry Burden knew at the time of the said meeting, and was personally present at the room f. 692) door where the same was held during a portion of the session; that the said meeting was duly adjourned to be held on the succeeding morning, at eleven o'clock, at the office of the president in the city of Albany. That a meeting of the said trustees was accordingly held at the office of the president in the city of Albany on the said succeeding day, being Thursday, the 5th day of August, at which four of the said trustees appeared and acted, and at which meeting the said Henry Burden appeared, and requested a recess until four o'clock in the afternoon, f. 693) which was acceded to by the other trustees, who reassembled at 4 o'clock and organized the meeting, at which the following resolution was unanimously adopted: Resolved, that Mr. John Townsend be the agent of this company, to manage its concerns and discharge all the duties, and exercise all the powers of said office until the further order of this board. And as these complainants are informed and believe and charge, that notice of the said resolution having been adopted, and a copy of the same, were given to the said Henry Burden, on the f. 694) sixth day of August, instant; that the said meeting was regularly adjourned to be held at the office of the company, in Troy, on Saturday, the 7th day of August then ensuing, at 2 o'clock, p. m.; that a meeting of the said trustees was accordingly held at the office of the said company in Troy, on the 7th day of August, 1847, at the hour appointed, at which four of the said persons elected trustees were present; which meeting, after the transaction of business, adjourned to meet at the office of the company on Tuesday, August 10, 1847, at f. 695) 2 o'clock, p. m.; that on the said last named day, and at the hour and place appointed, four of the said trustees met, and among other proceedings the said meeting appointed Philip Ford, clerk of the said company, of which an entry was duly made in the minutes of the

said meeting. That the said meeting adjourned until Thursday, the 12th day of August then next, at 11 o'clock, a. m., at the office of the president in Albany; at which time, place and hour last mentioned, f. 696) four of the said trustees convened, and a meeting was held, at which, among other proceedings, the following resolution was unanimously adopted: "Whereas, it has been stated to this board that Mr. Burden, the late agent of the Troy Iron and Nail Factory, has taken possession of some of the books of this company, and has refused to let our clerk, Mr. Ford, make entries in the same, and has excluded the said clerk from the office of this company: Therefore, resolved, That Mr. John Townsend, the agent of this company, take all lawful ways and means to recover possession of the said books of this company, f. 697) and that he reinstate the said clerk in his said office.

And these complainants further show and state, that since the year 1842, no election of trustees of the said company has been had until that held on the 3d day of August, 1847; but that John Townsend, Eleazer F. Backus, and the said Henry Burden, three of the persons last elected trustees, combined to act in that character; that the said John Townsend and Eleazer F. Backus have repeatedly, and in each year when the said elections ought to have been held, urged the hold- f. 698) ing of the same, which the said Henry Burden has constantly evaded by absenting himself from the meetings of the stockholders, in violation of his agreement to meet with them, and the other stockholders being unwilling to act without his concurrence, have suffered the said company to continue as aforesaid without the election of trustees, until the 3d day of August instant, when, in the judgment of the other stockholders, the condition of this company, and especially of its affairs and concerns with the said Henry Burden, rendered such election absolutely necessary; and it was agreed upon by the said John Townsend, f. 699) Eleazer F. Backus, and Henry Burden, at a meeting of the trustees in the month of November, 1846, that such election should be had on the first Tuesday of August, 1847, and the same was accordingly held as above stated. That since the employment of the said Henry Burden, by the committee in 1842, as hereinbefore stated, the said John Townsend and Eleazer F. Backus composing the said committee and the two remaining trustees, until August, 1847, have per- f. 700) mitted the said Henry Burden to continue to act under the said employment, and although he has called himself agent, and has signed papers as such relating to the affairs of the company in the year 1842, and in the same manner in the subsequent years, for the convenience of the transaction of the business of the said company, yet he has never, since the said year 1842, been appointed agent or superintendent of the said company under the by-laws thereof, and has not been recognised as such agent or superintendent by the said John Townsend, nor, as f. 701) these complainants are informed and believe, by the said Eleazer F. Backus, or by any of the other stockholders of the said company.

And these complainants further show and state, that the business of

the said factory and company is very large and extensive, employing nearly two hundred laborers, and furnishing manufactured iron to various persons and firms in different and distant parts of the United States, and purchasing coal, iron, pig iron, and materials for carrying on their business in various cities and places in the United States, to the amount of over $400,000 dollars annually; that the said business f. 702) is necessarily conducted to a great extent on credit, both in sales and purchases, and requires the utmost regularity, exactness, and promptitude in its management, to meet the debts necessarily incurred, to fulfil the orders received, to collect the debts due, and to keep order and regularity among the workmen and others employed in a business of such extent, and that any disorder, interruption or confusion in its management must be attended with irreparable loss and injury.

And these complainants further state and show, that, as they are in- f. 703) formed and believe, the said Henry Burden, on the 11th of August, 1847, entered the business office of the said company at Troy, and interfered with the business of the clerk of the said company, Philip Ford, preventing his making entries in the books of the company, which it was his province and duty to make, and interrupting and obstructing him in the discharge of his duties, and finally excluded and kept the said clerk out of the said business office, and from access to the books and papers thereof, and prevented his performing any of the du- f. 704) ties of his said office, and assumed to discharge the said Philip Ford from his said office, and took the exclusive possession of the said business office; and, as these complainants are informed and believe, on various days and times since the said 11th day of August, the said Henry Burden has forbidden the workmen and others employed in and about the said factory in any way to recognise or respect or obey the directions of the said John Townsend, and has written letters to various persons who have heretofore had dealings with the said company, forbidding their transaction of business with the said John Townsend, f. 705) some of which letters, in the handwriting of the said Burden, have been seen by the said John Townsend, and has taken letters out of the post office at Troy, which were directed to the said John Townsend, as agent of the said company, and others directed to the Troy Iron and Nail Factory, and has opened them, and withheld them from the said John Townsend, and from the other officers and trustees of the said company, and has collected and received money belonging to these complainants; and has, since the day last mentioned, directed the work- f. 706) men at the said factory to turn off and keep from the grounds and premises of the company Henry H. Martin, and any and every of the Townsends who should presume to come there; and has undertaken to displace one William Gibson from the place and employment of foreman in the rolling mill of the said company, and forbid his laboring in the factory of said company, although without the aid, direction, and presence of the said Gibson the said rolling mill cannot be successfully or usefully conducted, and although the said Gibson had been for more f. 707) than two years employed as such foreman by the direction and

with the sanction of the trustees of the said company; and, as these complainants are informed and believe, and as appears from certain entries in a book made by or under the direction of the said Henry Burden, he has, since the day aforesaid, issued notes in the name of these complainants, signed by himself, and countersigned by one Peter Thalmar, whom the said Burden has undertaken to appoint clerk of the said company, and on his own sole authority; and has obstructed and prevented the filling and execution of orders by agents only appointed for
f. 708) the sale of articles manufactured by the said company, and has in various other ways and modes interfered with and interrupted the business of the said corporation, and has evinced a determination to gratify his own violent passions at the expense of the utter destruction of the business of the said factory; which conduct and acts of the said Henry Burden materially obstruct and interrupt the business of the said company, and if continued will necessarily suspend the same entirely, and produce the most serious losses to the said company and the stockholders thereof, which cannot be estimated and which cannot be com-
f. 709) pensated in damages.

And these complainants further state and show, that they have made propositions to the said Henry Burden to consent that a third person, disinterested between the parties, should be appointed to take charge of the said factory, and continue the business thereof, in the behalf and for the benefit of the said company and its stockholders, until the matters in controversy with the said Burden should be determined and settled, either by legal adjudication or by referees or arbitrators, which propositions the said Burden has refused and rejected. That, on the 21st
f. 710) day of August inst., it was agreed, between the said John Townsend, as president of and representing these complainants, and the said Henry Burden, that it should be referred to the counsel of the respective parties to agree on some place by which the business of the said company might be conducted and continued until the controversies aforesaid should be determined and settled, and by which all the controversies, and all questions in dispute between the said Henry Burden and the said corporation, or the stockholders thereof, might be amicably settled; and that, in pursuance of such agreement, as these complain-
f. 711) ants are informed and believe, two counsel representing the said Henry Burden, met with two counsel representing the said company and the other stockholders therein, and after deliberation and consultation the said counsel mutually and unanimously agreed upon a place by which all the said controversies were to be determined by arbitrators then agreed upon, and by which the business of the company was to be continued and carried on by Andrew White, under the joint instructions of the said John Townsend and the said Henry Burden; and in the absence of such instructions, according to the judgment of the said
f. 712) agent; and that he should possess all the powers and perform the duties prescribed in the by-laws of the said company in relation to the agent or superintendent, and containing other provision for the quiet and orderly conducting and continuing the business of the said com-

pany. But the said Burden has repudiated the said agreement of his counsel, and violated the agreement so made by him with the said John Townsend, and utterly refused to abide by the arrangements so made by his counsel.

And the said Henry Burden, by his whole conduct, and especially in the particulars hereinbefore stated, has evinced, and still mani-
f. 713) fests, a reckless determination utterly to ruin and destroy the business of the said company, unless the whole and absolute management thereof be committed to him, and be allowed to control the trustees and officers of the said company.

And the said Henry Burden threatens to continue the same course of conduct herein particularly described, and threatens and claims that he will intercept business letters addressed to the said John Townsend, as agent of the said company, and similar letters addressed to the said company; and that he will collect moneys belonging to the said com-
f. 714) pany, and issue notes and other obligations in their name; and that he will interfere with, interrupt, and obstruct the business of the said company, and will exclude the clerk thereof, the said Philip Ford, from the business office of the said company, and prevent his performance of his duties as such clerk; and that he will displace the foreman, laborers, and workmen in the said factory at his pleasure, without reference to the directions of the trustees of the said company, and will incur debts in behalf of the said company; and, generally, that he will f. 715) act as agent of the said company, and control its business operations in defiance of the directions and resolutions of the trustees thereof.

To the end, therefore, that the said Henry Burden may, upon his corporal oath, full, true, and perfect answer make to all and singular the matters hereinbefore stated and charged, as fully and particularly as if the same were here repeated, paragraph by paragraph, and he thereto particularly interrogated; and that the said Henry Burden may set forth and discover all sums of money belonging to the said corpora-
f. 716) tion, received by him since the 3d day of August, 1847, and may be compelled, by the decree of this court, to pay over the said money to the said John Townsend, as agent or superintendent of the said company, or to such person as shall be appointed such agent or superintendent by the trustees of the said company, with interest thereon to the time of such payment; and that he may, in like manner, be compelled to deliver to such agent all letters, invoices, orders, and other papers relating to the business of the said company, received or in any f. 717) way obtained by him since the said 3d day of August, 1847, or that may hereafter be received or obtained by him; and that these complainants may be protected and maintained, in the prosecution and conduct of the business of the said company, against the interference and interruption of the said Henry Burden; and that he may be perpetually restrained and enjoined against any interference with or interruption of the business of the said company, and from taking, opening, or retaining any letters, invoices, orders, or other papers relating to the business

of the said company, addressed either to the said John Townsend, as
f. 718) agent of the same, or to the said company directly; and that he may be required to deliver over to the agent or superintendent of the said company all such letters, invoices, orders, or other papers addressed to the said Henry Burden; and that he may be restrained and perpetually enjoined from displacing the said Philip Ford, clerk of the said company, or any other person who may be appointed such clerk by the trustees of the said company, and from excluding or in any way obstructing such clerk in the performance of his duties; and may in like
f. 719) manner be enjoined and restrained from displacing any foreman, laborer, or workman employed in the said factory by the direction of the trustees thereof, or of their lawful agent; and from collecting or receiving any money or property belonging to the said company, and from issuing any notes or other obligations in the name of the said company, or contracting any debts in its behalf, or doing or performing any acts whatever as agent of the said company.

And that these complainants may have such farther or such other relief as the circumstances of their case entitle them to; and that, in the
f. 720) mean time, the said Henry Burden may be restrained, by the order and injunction of this honorable court, from any interference with, or interruption of, the business of the said company; and from taking, opening, or retaining any letters, invoices, orders, or other papers relating to the business of the said company, addressed either to the said John Townsend, as agent of the same, or to the said company directly; from displacing the said Philip Ford, clerk of the said company, or any other person who may be appointed such clerk by the trustees of the
f. 721) said company, and from excluding or in any way obstructing such clerk in the performance of his duties; from displacing any foreman, laborer, or workman employed in the said factory by the direction of the trustees thereof, or of their lawful agent; and from collecting or receiving any money or property belonging to the said company; and from issuing any notes or other obligations in the name of the said company, or contracting any debts in its behalf, or doing or performing any acts whatever as agent of the said company.

And that a writ of subpœna may be issued out of and under the
f. 722) seal of this court in the form it has prescribed, directed to the said Henry Burden, requiring him to appear before this court, at a day to be therein specified, to answer to this bill of complaint under the penalty of an attachment.

The Troy Iron and Nail Factory.

By JOHN TOWNSEND,
President and agent, or superintendent.
PRUYN AND MARTIN,
Solicitors for complainant.
J. C. SPENCER,
Of counsel for complainants.

CITY AND COUNTY OF ALBANY, *ss.*

John Townsend, of the city of Albany, being duly sworn, deposes

f. 723) and says: That he is now, and for more than ten years past has been, the president of the Troy Iron and Nail Factory; and that he is now the agent or superintendent thereof, by virtue of the appointment stated in the foregoing bill; that by means of his said office of president, and as a trustee of the said corporation, he has acquired and possesses, as he verily believes, full and particular knowledge of the matters of the said bill, and the facts therein stated; that he has read the said bill subscribed by him; and that the same is true of his own knowledge, f. 724) except as to the matters which are therein stated to be on the information and belief of the complainants; and as to those matters, he has been so informed and believes such information to be true.

(Signed) JOHN TOWNSEND.

Sworn before me, this 24th day of August, 1847.

(Signed) IRA HARRIS.

CITY AND COUNTY OF ALBANY, *ss.*

Philip Ford, of the city of Troy, being duly sworn, deposes and says: That the facts stated in the foregoing bill, at folios 52 and 53, in relation to the conduct of Henry Burden towards this deponent, as f. 725) clerk of the Troy Iron and Nail Factory, his interference with and interruption of the duties of this deponent, and his excluding this deponent from the business office of the said company, and from access to the books and papers thereof, are true in substance.

(Signed) PHILIP FORD.

Sworn to before me, this 24th day of August, 1847.

(Signed) IRA HARRIS.

CITY AND COUNTY OF ALBANY, *ss.*

William Gibson, being duly sworn, deposes and says: That he is, and for two years has been, foreman of the rolling mill in the factory f. 726) of Troy, of the Troy Iron and Nail Factory; and that, on or about the sixteenth day of August inst., Henry Burden, in the foregoing bill named, appeared at the factory and forbid the workmen and others therein employed to recognise or in any way obey or respect the directions of John Townsend, esq., of the city of Albany; 2d, on the 16th day of August instant, directed the workmen of the said factory to turn off, and keep from the grounds and premises of the said company, Henry H. Martin, and any and every of the Townsends who should f. 727) presume to come there; and, on the 21st day of August instant, the said Henry Burden told this deponent that he was discharged from his employment as such foreman, and endeavored to prevent this deponent working in the said factory as such foreman.

(Signed) WM. GIBSON.

Sworn before me, this 24th day of August.

(Signed) IRA HARRIS.

CITY AND COUNTY OF ALBANY, *ss.*

Henry H. Martin, of the city of Albany, being duly sworn, deposes and says: That, on the fourteenth day of August instant, he, at the request and with the sanction of three others of the trustees of the Troy f. 728) Iron and Nail Factory, prepared written propositions or suggestions to Henry Burden, in the foregoing bill named, that a third person, disinterested between the parties in the conditions mentioned in the said bill, should be appointed to take charge of the factoryof the said company at Troy, and continue the business thereof for the benefit of the company and its stockholders, until the said matters in controversy should be determined and settled, either by legal adjudication or otherwise; that the said propositions were delivered to the son of the said Henry Burden to be delivered to him; and the said Henry admitted to f. 729) this deponent that he received said written proposition or suggestion, and that the said Henry Burden has wholly refused to accede to the same.

And this deponent further says, that, as one of the counsel for the said company and for the stockholders thereof, other than the said Henry Burden, he attended the meeting of counsel mentioned in the foregoing bill, and that the occurrences and facts stated in the said bill, at folios 60, 61, and 62, occurred and took place at the said meeting, f. 730) as herein stated; and that, on the 23d day of August instant, the said Henry Burden, in the presence of this deponent, openly and utterly repudiated the said agreement, and refused to abide by the same.

H. H. MARTIN.

Sworn before me, this 24th day of August, 1847.
(Signed) IRA HARRIS.

Exhibit H.

This agreement, made this twenty-sixth day of August, 1847, between the Troy Iron and Nail Factory of the one part, John Townsend, Eleazer F. Backus, stockholders; Henry H. Martin, Isaiah Townsend, and Franklin Townsend, who claim to be stockholders of f. 731) the said company, of the second part, and Henry Burden also a stockholder of the said company, of the third part, witnesseth: That the parties agree that the questions arising between Mr. Burden and the Troy Iron and Nail Factory respecting his contract with the company in relation to the manufacture of spikes and nails, and the manufacture of horse shoes, and all other questions and disputes between him and the company, or between him and any of the stockholders of the company, or any of those claiming to be such stockholders as aforesaid, in relation to its business and his management thereof; and the f. 732) questions respecting the validity of the election of trustees of the said company on the third day of August, 1847, shall be submitted to the final award and arbitration of Hiram Denio, of Utica, Silas

Wright, of St. Lawrence, and John J. Palmer, of New York, or Daniel Lord, jr., or Philo Gridley, which ever three of them will serve, or of any two of such as shall serve, provided it be made in writing, by or before the first day of March, 1848. And the said arbitrators shall re-
f. 733) commend a course calculated to reconcile the parties, and enable them to conduct the business of the factory harmoniously and successfully. And in the event of the stockholders of the company not assenting to such recommendation within the time to be appointed by the arbitrators, that the arbitrators, or any two of them, shall direct a sale of the property belonging to the company, on such notice, and on such terms of credit and otherwise as they shall prescribe, and shall direct the execution of such conveyances and instruments to complete such sale by any or all of the parties hereto as the said arbitrators shall
f. 374) deem necessary; and in the mean time, and until the final disposition of the whole matter, either by the agreement of the stockholders, or by sale, Andrew White, of Albany, shall be agent, or superintendent of the concerns of the company, with the powers and duties of agent or superintendent as provided in the by-laws of said company; and shall immediately enter on the duties of such appointment; but he shall conform to any joint directions that shall be given him by John Townsend and Henry Burden; and when not so directed he is to act
f. 375) according to his own views of propriety; but he shall allow no other or greater commissions for the sale of goods of the said company in the city of Albany than is or may be allowed in the city of Troy; and all contracts made by Mr. Burden in behalf of said company with any of the hands or operatives of said iron works for wages, shall be strictly adhered to. That the books and papers belonging to the company in the possession of any stockholder, or of the sheriff of Renns. co., shall immediately be delivered to the said agent and retained by him, sub-
f. 736) ject to the inspection of any stockholder, and with liberty to take copies and extracts therefrom; and the compensation of such agent shall be at the rate of $2,000 per annum; and the present clerk, Philip Ford, shall be continued until a final disposition as aforesaid. The arbitrators shall fix their own compensation. All suits pending between the parties shall cease and be discontinued, except the suit in equity in the supreme court, brought by the Troy Iron and Nail factory against H. Burden, the proceedings in which shall only be suspended
f. 737) until the time above specified for a final determination, or until a revocation of this submission by the said Henry Burden; and in case such determination shall not for any cause be made, or in case of a revocation of this submission by the said Burden, the said suit shall continue, and all process and proceedings therein shall be in the same condition as on the day previous to the execution of this instrument.

And it is further agreed, that a judgment of the supreme court of the State of New York shall be rendered upon the award which shall be made pursuant to this agreement.

f. 738) And it is further agreed, that in case so many of the gentlemen above named as arbitrators, shall decline or be unable to act as

such, so that there shall not remain three to act, then other persons shall be substituted by John C. Spencer in behalf of the Troy Iron and Nail Factory, and of the stockholders and of those claiming to be stockholders therein, and of Samuel Stevens in behalf of the said Henry Burden, until three arbitrators be obtained willingly, and able to act, and such substitution signed by the said persons shall be deemed a f. 739) part of this submission, and all the powers and authority hereby given to the arbitrators named shall apply to the three persons who shall become arbitrators as herein provided.

Exhibit I.

Supreme court.—In equity.

THE TROY IRON AND NAIL FACTORY
vs.
HENRY BURDEN.

It is hereby stipulated by the solicitors for the complainants in the above entitled cause, that the injunction issued therein shall not be deemed to, and shall not restrain the defendant from doing any act or thing in relation to the said Troy Iron and Nail Factory, or the busi- f. 740) ness thereof, which he might lawfully do as a stockholder in the said Troy Iron and Nail Factory, or as trustees thereof had no injunction been issued; but this is not to authorize the said Henry Burden to interfere with Andrew White, the agent of the said company, in his management of the concerns thereof, in any other form or mode than as provided in a certain agreement this day made, in submitting to arbitration the matters in controversy between the parties; and this stipulation is to be deemed a construction of the meaning of the injunc- f. 741) tion in the above cause, and not as a waiver thereof, or of any part of the same; and that complainants' solicitors will deliver to S. Stevens, the defendants' solicitor, a copy of the bill filed in said cause, as soon as convenient, and without unnecessary delay.

Albany, August 26th, 1847.

(Signed) PRUYN & MARTIN,
Complt's sol'r.

Exhibit J.

In consideration of the sum of twelve thousand dollars, secured by Andrew White, to be paid to me, Henry Burden, I do hereby convey and assign to the said Andrew White one share in the capital stock of f. 742) the Troy Iron and Nail Factory, now belonging to me, but not including in this assignment the dividend of one thousand upon the said share this day declared by the trustees of the said company, which dividend remains to me and my assigns; this assignment is subject to a certain pledge of the said share this day made by me to John Townsend and E. F. Backus, to secure the payment of six certain promissory notes executed by me and Peter Burden to the said Townsend

and Backus for the payment of forty-five thousand dollars, with inter-
f. 743) est therein, included in said notes. Dated June 20, 1848.
Signed, H. BURDEN.

Exhibit K.

For value received, I hereby promise to pay to Henry Burden the sum of twelve thousand dollars, on or before the first Monday in August next, but in the event of my not transferring and assigning to him one share of the capital stock of the Troy Iron and Nail Factory, this day assigned to me by the said Burden, on or before the said first day of August next, then this obligation becomes void and of no effect, and this note is to be discharged and paid by such assignment. Dated
f. 744) June 20, 1848.
Signed, ANDREW WHITE.

Exhibit L.

At a meeting of the trustees of the Troy Iron and Nail Factory, held on Thursday, the 5th day of August, 1847:

On motion of Mr. Backus, seconded by Mr. F. Townsend, it was unanimously resolved, that Mr. John Townsend be the agent of this company to manage its concerns, and discharge all the duties and exercise all the powers of said office until further order of this board. And also that a copy of the foregoing resolution be signed by the president and secretary, and transmitted to all parties having dealings with the company.

Signed, JOHN TOWNSEND,
President.

FRANKLIN TOWNSEND, *Secretary pro tem.*
Dated Albany August 5th, 1847.

SIR: By the above circular you will be informed that I have been duly appointed agent of the "Troy Iron and Nail Factory." You will please address your communications hereafter to John Townsend, agent, Troy Iron and Nail Factory, Troy, N. Y.

Yours, respectfully,

JOHN TOWNSEND, *Agent.*

It is not true that John Townsend was elected agent of the Troy Iron and Nail Factory; I am the agent and owner of nearly two-thirds
f. 745) of said Troy Iron and Nail Factory, to whom address your communications as heretofore, and hereby forbid your transacting any business with John Townsend as such agent.

H. BURDEN, *Agent.*

Troy Iron and Nail Factory, August 24th, 1847.

Exhibit M.

Arbitration between Henry Burden and the Troy Iron and Nail Factory, and John Townsend, L. F. Backus, Henry Martin, Isaiah Townsend, and Franklin Townsend.

(Copy) Deposition of Chas. M. Keller, taken by the consent of the
f. 745) counsel for the respective parties in the above cause on the part of Henry Burden, on the 29th day of December, 1847. The witness being duly sworn and being examined by Mr. S. Stevens, of coun- 429
sel for Mr. Burden, testified as follows:

I was for nine years the chief examiner in the Patent Office; from 1836 to 1845, when I resigned; my duties were to examine the inven-
tions presented, and decide upon the question of novelty, and the patentability of the things claimed as new, and also to decide upon the le-
f. 746) gality of the papers. I am a mechanical engineer by profession, practically and theoretically, and have made it my special duty to study the history of inventions and make myself familiar with the description of machinery.

The specification of a patent for the manufacture of wrought nails or spikes, issued in 1825 to Henry Burden, and which is marked by me (the arbitrator) "A, D. W." being shown to the witness, he says he is acquainted with the same.

The specification of a patent granted to Henry Burden in 1834, for an improvement in the machinery for heading nails or spikes, and
f. 747) which is marked by me (the arbitrator) "B, D. W." being shown to the witness, he says he is acquainted with the same. 430

The patent and specification granted to Mr. Burden the 2d day of September, 1840, for new and useful improvements in the machinery
f. 748) for making hook or brad-headed spikes, which is marked by me (the arbitrator) "C, D. W." being shown to the witness, he says he is acquainted with the same.

In my opinion the invention of 1840 is entirely independent of those of 1825 and 1834. The principle of the invention of 1840 is for giving a head to that part of the iron preparatory to forming the hook-head, irrespective of the machinery which holds the iron or forms the
point of the spike, and this principle may be used in connexion with
f. 749) any machine which gripes the rod and upsets the iron to form the head, and does not necessarily involve the use of the machines patented in 1825 and 1834.

The use of the machine patented in 1840 would not infringe the patents of 1825 or 1834. The spikes made by the machine pa- 431
tented in 1825, and 1834, had the head formed all round and are commonly as a ship or boat spikes; that made in the machinery of 1840 has the head all on one side, and is known by the name of the "hook-headed spike," and is generally used for a different purpose, and sometimes for the same purpose that the first are used for. The hook-headed
spike is generally used for fastening the rail in the construction of
f. 750) railroads.

[The term improvement upon an existing machine is used to signify such a modification of the original principle as necessarily involves the use of the original principle.]

Mr. Martin, of counsel for all the parties but Mr. Burden, objected to the testimony above included in brackets, and it was taken subject to his objection.

On being further examined witness says: I have examined a model which represents essentially the machine described in the patent of 1825. There are several modifications of the principle of rolling 432
f. 751) the spike described in the patent of 1825. The model only represents the first example, described on the 1st, 2d, and 3d pages of specification " A, D. W."

I have also examined the model of the machine described in the specification of 1840. Both of these models are now present. The f. 725) model of the machine of 1840 represent things not described in the patent of that date. It represents the method of forming the hook-head on the spike as described in that patent, in connexion with the mode of forming the point of the spike different from that described in the patent of 1825.

The use of the invention patented in 1840, for making the hook-headed spike as represented by this model, would not infringe upon the patent of 1825 or 1834. The hook-headed spikes are not to my knowledge ever used in the construction of boats or other vessels. They are never used for the purposes for which the others are constructed unless from necessity.

f. 753) On his cross examination by Mr. Martin, as counsel for all the parties except Mr. Burden, witness stated: 433

The machine patented in 1825 is for making wrought iron spikes or nails; from the description of the machinery in that patent of 1825, the head of the spike must necessarily be formed on all sides. You might so modify the header described in the patent of 1825, as to make the head of the spike all on one side, but it is not so described in the spe-
f. 754) cification. The heading part as described in that machine is substantially the same with the machines known prior to 1825. There is nothing in the description of the header in the patent of 1825 which prevents the changing of the form of the head of the spike, provided the form of the header be changed. There is nothing in the specification of the
f. 755) patent of 1825 which prescribes any particular form to the head of the spike.

The patent of 1834 admits a change of the form of the head, but it seems to contemplate a head on all sides. 434

The shape of the head is left optional with the person making the machine. But as the specification points out the defects in the manner of making the head on all sides, leaving the head ragged, the object was to make the head smooth.

The side steels are described in the specifications of the patents of 1825 and 1834. The patent of 1834 claims the making of these of chilled cast iron, instead of steel.

Question. Does not the patent of 1840 claim as a part of the mode of making the hook-headed spikes an alteration in the form of the side
f. 756) steels or dies alluded to in the patents of 1825 and 1834?

Answer. It contemplates a change in the form of the gripping dies or side steels, according to the form desired to be given to the head.

The alteration in the gripping dies in the patent of 1840, was 435

intended for the same purpose in relation to hook-headed spikes, as the box header in the patent of 1834 was for other spikes. That is, to pre-
f. 757) vent the metal from spreading too far, and being ragged.

The machines described in the patents of 1825 and 1834 would admit of being so altered as to make hook-headed spikes, but not particularly useful in my judgment. The sole use of the bender is to bend
f. 758) that part of the iron of which the head is to be formed, that the metal may be properly disposed so as to receive the action of the header; that relieves the lateral force which would otherwise be required to form the head. The making of hook-headed spikes by a bender is a better mode than by any that could be adopted by any variation of the die-box of 1834.

The object of altering the shape of the gripping dies and the header, in combination with the bending the rod in the patent of 1840, was to determine the external configuration of the head of the hook-headed spikes, as the die-box was used in the patent of 1834 to determine the configuration of the boat or ship spike. 436

The altering of the gripping dies in the patent of 1840 also operated to prevent the head of the spike from spreading; with the gripping dies
f. 759) of 1840 a box header is unnecessary and could not be used.

On his further direct examination witness states: The side-steels
f. 760) mentioned in the patents of 1825 and 1834, gripe the iron on two sides only, leaving the other two sides to be gripped by the rolling swedges; the gripping dies represented in the model of the machine of 1840 gripe the iron on four sides.

I never knew gripes or jaws to be called side-steels till the patents of 1825 and 1834; what are called side-steels in these two patents should be called gripping jaws, as they hold the rods only on two sides, like the jaws of a vice; when they are made to embrace the bar on all sides, then they are called gripping dies. 437

What are called side-steels, as described in the patents of 1825 and 1834, cannot be used without the swedges or some substitute for them.

These gripping jaws were used, as I have learned from books, previous to 1825, and so were gripping dies; there were models in the Patent Office for making nails previous to 1825, which had the gripping
f. 761) jaws and the gripping dies.

[No 1. Neither of the three patents spoken of in my testimony claim the gripping jaws or gripping dies.]

[No. 2. The heading box, as described in the patent of 1838, is not new.]

A hook-headed spike could not be made in either of the machines, as described in the patents of 1825 and 1834.

f. 762) Mr. Martin objected in due season to the testimony in the paragraph in the bracket "No. 1" above, and also in bracket "No. 2." 438

On his further cross examination witness says: I can make a box header with which I could make a hook-headed spike.

I do not know of gripping jaws or gripping dies made of chilled cast iron previous to the patent of 1834.

CHAS. M. KELLER.

The within is the deposition of Charles M. Keller, taken before me, December 29, 1847.

(Copy)

DEODATUS WRIGHT,
Recorder of Albany.

Exhibit N.

f. 763) Circuit court of the United States, for the northern district of New York. 439

The Troy Iron and Nail Factory vs. Erastus Corning, James Horner and John F. Winslow.

STATE OF NEW YORK,
City and county of Albany, ss.

Deodatus Wright of said city, being duly sworn, says, that on or about the twenty-ninth day of December last, he attended at the office of Samuel Stevens, esq., in the city of Albany, by request, to take the testimony of Charles M. Keller, in an arbitration suit between Henry Burden and the Troy Iron and Nail Factory and others; that said Keller was sworn by this deponent, who was at that time, and still is, re-
f. 764) corder of the said city of Albany, and duly authorized to administer oaths; that said Keller was examined as a witness in said arbitration suit by said Samuel Stevens, as counsel for said Henry Burden, the said Burden being present at such examination, and cross examined by Henry H. Martin, esq., as counsel for the other parties 440 to said suit. The testimony of said witness was on said examination reduced to writing by this deponent, and the foregoing is, as deponent believes, a copy of said testimony as taken by him at the time. Deponent gave the original deposition to his then clerk, John B. Sturtevant, to copy, and the annexed is in said Sturtevant's handwriting, and deponent supposes is a correct copy. The original deponent lately gave to Mr. Samuel Stevens.

DEODATUS WRIGHT.

Sworn before me, this 4th day of August, 1848.
WILLIAM PARMELEE, *Albany co. judge.*

Exhibit O. 441

Circuit court of the United States, for the northern district of New York.

The Troy Iron and Nail Factory vs. Erastus Corning, James Horner, and John F. Winslow.

STATE OF NEW YORK, *city and county of Albany, ss.*

f. 766) John B. Sturtevant, being duly sworn, says, that the foregoing copy, deposition of Charles M. Keller, was made by this deponent, as

the clerk of Deodatus Wright, recorder of the city of Albany, and at his request, from the original minutes of testimony in the handwriting of said Wright, and that said copy of testimony was intended to be and is, as deponent believes, a correct copy of the said original.

JOHN B. STURTEVANT. 442

Sworn before me, this 5th day of August, 1848.

DEODATUS WRIGHT,
Recorder of the city of Albany.

f. 767) *Exhibit P.*

This indenture, made the second day of April, in the year of our Lord one thousand eight hundred and forty-seven, between the Troy Iron and Nail Factory of the first part, and Erastus Corning, of the city of Albany, of the second part, witnesseth: That the said party of the first part, for and in consideration of the sum of one thousand five hundred dollars, lawful money of the United States of America, to it in hand paid by the said party of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, f. 768) hath granted, bargained, sold, aliened, remised, released, conveyed and confirmed, and by these presents doth grant, bargain, 443 sell, alien, remise, release, convey and confirm, unto the said party of the second part, and to his heirs and assigns forever, all the undivided one-half part of that certain lot and premises conveyed to the party of the first part, by William P. Van Rensselaer and wife, by deed bearing date the fourteenth day of February, 1845, and described in said deed as follows: All that lot of land or dock described as follows, commencing at the north line of lands of the said William P. Van Rensselaer, f. 769) in the town of Greenbush, on the Hudson river, being the north line of the dock heretofore built and used by said Troy Iron and Nail Company, and extending along said dock and the addition thereto recently made, south one thousand feet, and extending easterly to the Troy and Greenbush railroad, together with all and singular the tenements, hereditaments, and appurtenances thereunto belonging or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; also all the estate, right, f. 770) title, interest property, possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, 444 of, in, and to the above described premises and every part and parcel thereof, with the appurtenances; to have and to hold the above granted and described premises, with the appurtenances, unto the said party of the second part, his heirs and assigns, to his and their own proper use and behoof forever: And the said Troy Iron and Nail Factory, for itself, its successors, doth hereby covenant, promise, and agree, to and with f. 771) the said party of the second, his heirs and assigns, that it has not made, done, committed, executed, or suffered, any act or acts, thing or things whatsoever, whereby or by means whereof the above mentioned

and described premises, or any part or parcel thereof, now are, or at any time hereafter shall or may be, impeached, charged, or encumbered in any manner or way whatsoever.

In witness whereof the party of the first part hath hereunto set its hand and corporate seal, and caused the president of its board of trustees to sign these presents, the day and year first above written.

H. BURDEN, *Agent.*
JOHN TOWNSEND, 423
President.

f. 772) Signed, sealed, and delivered in the presence of—
WM. PARMELEE.

STATE OF NEW YORK, *Albany, ss.*

On this fifth day of April, 1847, before me, came Henry Burden and John Townsend, both to me known to be the same persons who executed above deed, who being by me duly sworn say, and the said Burden says he is agent, and the said Townsend that he is president of the Troy Iron and Nail Factory, the party of the first part in said f. 773) deed named; and deponents further say, that as such agent and president they severally executed said deed, being thereto duly authorized by said party of the first part, which to me is satisfactory proof of the due execution thereof, and I allow it to be recorded.

WILLIAM PARMELEE,
Mayor of Albany.

Recorded April 17, 1847, at 10 o'clock, a. m.
A. H. SHELDON, *Clerk.*

STATE OF NEW YORK,
Rensselaer county, ss.

CLERK'S OFFICE, TROY, *August* 3, 1848.

I, Ambrose H. Sheldon, clerk of said county, do hereby certify, 424 that I have compared the foregoing copy deed thereof remaining in this office, and that it is a correct transcript thereof, and of the whole of said record.

f. 774) In testimony whereof I have hereunto subscribed my name and affixed the seal of the said county, this 3d day of August, [L. S.] 1848.

A. H. SHELDON,
Clerk of Rensselaer county.

Copy of defendants' exhibit Q.

Mr. J. F. WINSLOW.

DEAR SIR: I intend going to Albany by the 2 o'clock train, previous to which (say 1 o'clock) I will do myself the pleasure of calling at your office to compare notes about tariff of prices of our goods, particularly spikes. Would it not be well to accompany me to Albany?

It is said in the multitude of counsel there is safety; perhaps our mutual friends in Albany might suggest something beneficial. 424

Yours, truly, H. BURDEN.

f. 775) March 9, 1846.

Please reply, and oblige H. B.

Copy of defendants' exhibit R.

ALBANY, *March* 25, 1846.

J. F. WINSLOW, esq.

DEAR SIR: The boat leaving at 6 o'clock instead of 5, I have time to say, that I have secured 300 tons Elkridge iron certain, and 600 (or 300 more) conditional, at last year's prices, $30, 6 mos. at Baltimore.
f. 776) I am in hopes to get 500 tons of another brand at $32, delivered at Albany; so from this you see that iron is not much on the 426 advance. Should you wish me to do any thing for you in the purchase of Elkridge or other iron, write me by to-morrow's mail; address care of E. Pratt & Bro. Gibson will be out of pig iron next week; hope you will be able to let him have the 40 tons borrowed, from iron I understand you have on the river. I just learned that one of the puddlers had hired a helper from your works some time since, without
f. 777) the knowledge of Gibson; he only discovered it yesterday. If you want him let Gibson know, and he will immediately discharge him. I had supposed that my men knew the rules, and had in no instance violated them. I have this day written all my agents and customers that the discount on spikes would, from and after the 1st proximo, be 30 per cent. See that your customers are apprised of this also, which I believe was our understanding.

Yours, truly, H. BURDEN.

Copy of defendants' exhibit marked S. 427

TROY IRON WORKS, *November* 24, 1846.

f. 778) J. F. WINSLOW, esq.

DEAR SIR: You doubtless remember that at the time we agreed to divide the order for spikes for the Housatonic railroad, we were of opinion that 4½ cents per lb. was too low a price, and mutually agreed to hold all hook-headed spikes at 4¾ cents per lb., and countersunk spikes at 5 cents per lb., unless we should at some future period mutually agree to reduce the price to eastern roads. Since that time I have acted
f. 779) strictly in accordance with this agreement; but in consequence of many of my old and valued customers having left me and ob- 428 tained their supplies from you, I am anxious to know the prices at which you have been selling since the date of that agreement. Your reply by the bearer will much oblige, yours, truly,

H. BURDEN.

Copy of defendants' exhibit marked T.

TROY IRON WORKS, *November* 27, 1846.

Mr. J. F. WINSLOW.

DEAR SIR: Having an appointment in Albany this afternoon on the subject of our spike trade, will thank you to send me an answer to my note of Wednesday last, it being necessary I should be furnished with
f. 780) an answer prior to my leaving.

Yours, truly, H. BURDEN.

Copy of defendants' exhibit marked U. 429

TROY IRON WORKS, *Dec.* 11, 1846.

Mr. J. F. WINSLOW.

DEAR SIR: Your note of the 10th inst. is at hand. The [marked] iron I understand has been returned; I have no pig iron of the same brand I had of you. Will you take Richmond iron in exchange? I
f. 781) am told it is better iron. There is some ten tons coal you took of ours, which Mr. Yates says you were to return; I should like to receive it before your teams draw it all away from the dock. While in Albany yesterday settling some accounts with Mr. Corning, the subject of the spike trade came up; Mr. C. thinks it well worthy of another effort to arrange the sales of spikes, so as to preclude the possibility of a misunderstanding in future; I am of the same opinion, and with a view to that end, I have not to this moment sold a hook-headed spike for less
f. 782) than $4\frac{3}{4}$, and countersunk spikes for less than 5 c.

From and after the arrangement of our spike difficulties last 430 fall, I had made up my mind to share with you the spike business; for some cause or other you have been selling $5 per ton lower than I have for many months; whether it is my fault or yours I do not undertake to say; the question for us to settle is, shall we make another effort, and if successful let us have the agreement so entered into in writing as to remind us of our obligations here, where I believe we were before.
f. 783) Let me, therefore, propose that we meet once more; I do not think we are so far apart as not to meet and agree; at any rate, I believe with Mr. Corning, that it is worthy of an effort, and propose to meet you to-morrow evening at my office, at 7 o'clock, where we can be all alone; it is the close of a week, a befitting time, and if we conclude to meet, let us do so in that spirit of which our consciences will approve hereafter, without which we cannot expect to succed.

I shall be pleased to have your views on the subject. 431

Yours, &c., H. BURDEN.

Copy of defendants' exhibit V.

f. 784) TROY IRON WORKS, *December* 16, 1846.

Mr. J. F. WINSLOW.

DEAR SIR: Until I have more leisure, which I trust to have some 8

or 10 days hence, to draw up articles of agreement for our future government in the manufacture and sale of spikes, together with all matters having for their object the permanent peace, harmony, and profit of our respective works; I hereby consent and agree to reduce the price of hook-headed spike to 4½ cents per lb., cash, in hopes that you will give me half of all orders which you may have obtained in con-
f. 785) sequence of having sold under me for some months past. 432

Yours, truly, H. BURDEN.

N. B. It being understood that the price of said hook-headed is to remain at 4½ cents until we mutually agree to change it. H. B.

Copy of defendants' exhibit marked W.

TROY IRON WORKS, *December* 29, 1846.

Mr. J. F. WINSLOW.

f. 186) DEAR SIR: Having made a good beginning in arranging prices of labor, would it not be well to settle other matters of equal importance, viz., the manufacture and sale of spikes, division of our dock premises, and the drawing of water from the reservoir. The division of the dock I postponed in hopes ere this of obtaining my deed from Van Rensselaer, not yet effected, but hope to soon. In the mean time think it well to have it divided. One-third the capacity of the re- 433
servoir is sufficient for my purposes; the additional two-thirds you want, and which I am willing you should control on condition that you pay
f. 787) me a reasonable rent; the interest of money expended, with the expense of keeping in repair, I estimate at $700 per annum; I therefore propose that you control by drawing as you deem proper two-thirds of the water on top or surface of the pond, by paying me $400 per annum; you need not engage for more than one year, until its real value is ascertained; I know, however, it will save you $1,000 for every $100 it cost you; I should like to know whether, and if so, when we can meet to arrange these matters.

Yours, truly, H. BURDEN.

Schedule X.

f. 788) We, the subscribers, Ruggles Whiting, John Converse, Nathaniel Adams, E. F. Backus, Henry W. Delavan, do hereby cer- 434
tify, that we have associated together and formed a company for the purpose of establishing a manufactory of bar iron, steel, nail rods, hoop iron, iron-mongery, and sheet copper, and forming and making all kinds of machinery, tools, and implements, made, used, or improved, or which may be used or improved, in or about manufactories established for such purposes, and are desirous of being incorporated under and by virtue of an act of the legislature of the State of New York,
f. 789) entitled an act relative to incorporations for manufacturing purposes, passed twenty-second day of March, 1811, by the corporate

name of Troy Iron and Nail Factory; that such manufactory is to be established in the town of Troy, in the county of Rensselaer, with a capital stock of ninety-six thousand dollars, divided into sixteen shares of six thousand dollars each, and that the persons hereinbefore named are the trustees, who are to manage the concerns of the said company for the first year.

In witness whereof we have hereunto set our hands and seals, this sixteenth day of October, in the year eighteen hundred and thirteen.

RUGGLES WHITING, [L. S.] 435
JOHN CONVERSE, [L. S.]
NATHANIEL ADAMS, [L. S.]
E. F. BACKUS, [L. S.]
HENRY W. DELAVAN. [L. S.]

f. 790) In presence of—
WILLIAM M. BLISS,
BENJ. R. WHITING,
JOHN CONVERSE, and
NATHANIEL ADAMS.

STATE OF NEW YORK, *ss.*

Be it remembered, that on the sixteenth day of October, in the year one thousand eight hundred and thirteen, before me, William M. Bliss, one of the masters of the court of chancery of said State, personally came Ruggles Whiting and John Converse, named and described 436 in the within written certificate, by them subscribed, and acknowledged that they had severally subscribed their names and affixed their seals to the same certificate for the uses and purposes therein mentioned.

WM. M. BLISS,
Master in chancery.

f. 791) STATE OF NEW YORK, *ss.*

Be it remembered, that on the eighteenth day of October, in the year one thousand eight hundred and thirteen, before me, William M. Bliss, a master in chancery, personally came Nathaniel Adams, to me known, and acknowledged that he had duly signed and sealed the within written certificate for the uses and purposes therein mentioned.

WM. M. BLISS,
Master in chancery.

STATE OF NEW YORK, *ss.*

October 19, 1813, before me, Henry Jones, a master in chancery in f. 792) and for the State of New York, personally appeared E. F. 437 Backus and Henry W. Delavan, two of the signers of the within instrument, known unto me, and acknowledged that they executed the same for the purposes within mentioned.

HENRY JONES,
Master in chancery.

We, the subscribers, to wit, Isaiah Townsend and John Townsend, in the name of I. & J. Townsend, Eleazer F. Backus, James Swords, Ebenezer Irving, executor of the last will and testament of William Irving, deceased, and Josiah Converse, surviving executor of the last
f. 793) will and testament of Nathaniel Adams, deceased, having heretofore been associated together and formed a company for the purpose of establishing a manufactory of bar iron, steel, nail rods, hoop iron, iron-mongery, and sheet copper, and forming and making all kinds of machinery, tools, and implements, made, used, or improved, which may be made, used, or improved, in and about manufactories established for such purposes, and been incorporated under and by virtue of the act of the legislature of the State of New York, entitled "An act relative to incorporations for manufacturing purposes," passed the twenty-second day of March, eighteen hundred and 438
eleven, do hereby certify, that we have again associated together and formed a company for the purpose of establishing a manufactory of
f. 794) nail rods, hoop iron, cut nails, and spikes, and forming and making all kinds of machinery, tools, and implements, and wares, made, used, and improved, or which may be made, used, or improved, in and about manufactories established for such purposes; and that we are desirous of being again incorporated under and by virtue of the act aforesaid, any act or acts in addition to or amending the same, under the corporate name of the "Troy Iron and Nail Factory;" that such manufactory is to be continued and established in the city of Troy, in the county of Rensselaer; that the capital stock of said company shall be ninety-six thousand dollars, dived into sixteen shares
f. 795) of six thousand dollars each; that the number of trustees of said company shall be six, and that Isaiah Townsend, John Townsend, Eleazer F. Backus, James Swords, Ebenezer Irving, and Josiah Converse, above named, shall be the trustees to manage the concerns 439
of said company for the first year.

In witness whereof, we have hereunto set our hands and seals this twenty-fifth day of April, in the year one thousand eight hundred and thirty-five.

ISAIAH TOWNSEND, [L. S.]
By JOHN TOWNSEND,
His attorney.
JOHN TOWNSEND, [L. S.]
E. F. BACKUS, [L. S.]
EBENEZER IRVING, [L. S.]
JAMES SWORDS, [L. S.]
JOSIAH CONVERSE. [L. S.]

Signed and sealed in presence of us, to James Swords, John T. Irving.
f. 796) By Josiah Converse, in the presence of W. M. Soul- 440
den, W. M. Soulden. By Isaiah Townsend, John Townsend E. F. Backus, Ebenezer Irving, in presence of Teunis Van Vechten.

I, John T. Irving, first judge of the court of common pleas for the city and county of New York, and a counsellor of the Supreme Court, do certify, that on this twenty-eighth day of April, in the year one thousand eight hundred and thirty-five, before me personally came James Swords, one of the persons described in and who has executed the above instrument, and who is well known to me, and who acknow-
f. 797) ledged that he had signed, sealed, and executed the same, and that it was his act and deed.

JOHN T. IRVING,
First judge of the court of common pleas for the city and county of New York, 441
and a counsellor of the Supreme Court.

STATE OF NEW YORK,
Albany county, ss.

On this fifth day of June, 1835, before me personally came Teunis Van Vechten, esq., and William M. Soulden, of the city of Albany, to me severally known, who being by me severally duly sworn, did severally depose and say: And firstly, the said Teunis Van Vechten, for him-
f. 798) self, says, that he is a resident of the city and county of Albany, and a subscribing witness to the execution of the foregoing instrument by Isaiah Townsend, John Townsend, Eleazer F. Backus, and Ebenezer Irving; that he was present, and saw John Townsend, Eleazer F. Backus, and Ebenezer Irving, to him severally known to be the same persons described in and who executed the said indenture, severally duly executed and acknowledged the same as their act and deed; and also that he was present and saw John Townsend, to him known
f. 799) to be the attorney of Isaiah Townsend, one of the parties 442 named and described in the foregoing instrument, duly execute and acknowledge the same as the act and deed of the said Isaiah Townsend; and the said William M. Soulden for himself deposeth and says, that he is a resident of the city of Albany, and the subscribing witness to the execution of the foregoing instrument, by Josiah Converse, one of the parties thereto; that he was present and saw the said Josiah Converse, to him known to be the same person described in and who executed said instrument, duly executed and acknowledged the same as his act
f. 800) and deed. Let it be recorded.

R. J. HILTON,
Judge Albany county courts, counsellor, &c.

STATE OF NEW YORK,
Secretary's office.

I have compared the preceding with two original certificates of incorporation on file in this office, (the first of which was filed on the 15th day of January, 1814, and the second of which was filed on the 20th day of July, 1835,) and do certify, that the same are correct transcripts therefrom and of the whole of said originals. 443

f. 801) Given under my hand and the seal of this office at the city of Albany, the second day of August, in the year of our Lord [L. S.] one thousand eight hundred and forty-eight.

ARCHIBALD CAMPBELL,
Deputy Secretary of State.

Schedule Y.

Whereas John Converse, of Troy, has sold the stock which he held in the Troy Iron and Nail Factory to Henry Burden; we the subscribers, stockholders in the said factory, consider that Mr. Converse is no longer the agent of the said Troy Iron and Nail Factory, as will appear by his letter of this date resigning the said agency.

f. 802) And we hereby appoint Henry Burden to be the agent of the Troy Iron and Nail Factory, under the following conditions and limitations, to wit: 444

That, under the directions of I. & J. Townsend, he shall have the general superintendence of every thing which relates to the manufacturing part of the establishment, and of all persons who may be employed therein or connected with it, but he is not to make any engagements on the part of the company, except with the advice and consent of I. & J. Townsend.

Mr. Ford is to remain in the employ of the company in the same f. 803) manner as heretofore, and keep the books and have charge of the accounts of the concern, and also have charge of the store, and the purchases and sales connected therewith, under the direction of the said I. & J. Townsend.

Albany, January 26, 1831.

I. & J. TOWNSEND,
E. F. BACKUS,
TH. R. SMITH, 445
EBEN'R IRVING, *Ex'r*
to estate of Wm. Irving, deceased.
JOSIAH CONVERSE.

Exhibit Z, 1.

In consideration of twenty thousand dollars secured by Henry Burden to be paid to me, I, John Townsend, do hereby convey and assign to the said Henry Burden two shares in the capital stock of the f. 804) Troy Iron and Nail Factory, now belonging to me; and I hereby surrender the certificate of the said shares, and authorize the proper officers of the company to issue new certificates according to the assignment, and by this assignment I transfer as well my own interest in the said shares, as the interest of the late firm of I. & J. Townsend, of which I am the surviving partner.

JOHN TOWNSEND.

Dated June 20, 1848. 446

Exhibit Z.

In consideration of thirty thousand dollars secured me by Henry
f. 805) Burden, to be paid to me, Eleazer F. Backus, I do hereby convey and assign to him three shares in the capital stock of the Troy Iron and Nail Factory now belonging to me, and hereby surrender the certificates of the said shares, and authorize the proper officers of the company to issue new certificates to him, according to this assignment.

E. F. BACKUS.

Dated June 21, 1848.

Exhibit Z, 2.

In consideration of ten thousand dollars secured to be paid by Hen-
ry Burden for my benefit, I, Isaiah Townsend, do hereby assign and
f. 806) convey to the said Henry Burden one share in the capital 447
stock of the Troy Iron and Nail Factory belonging to me, and the certificate of which stands in my name, together with the dividend of one thousand dollars upon the said share recently declared by the trustees of the said company, subject to a pledge of the said share of stock this day made by me, for the benefit, and with the consent of the said Henry Burden, to John Townsend and Eleazer F. Backus, to secure the payment of six certain promissory notes, executed by the said Hen-
f. 807) ry Burden, and Peter A. Burden, on the 21st day of June, instant, to the said John Townsend and Eleazer F. Backus, for the payment in the whole of forty-five thousand dollars, with the interest thereon included in the said notes; and I hereby authorize the proper officers of the said company to transfer the said share to the said Henry Burden, according to this assignment.

ISAIAH TOWNSEND.

Dated June 30, 1848.

Exhibit AA. 448

PHILADELPHIA, *Feb'y* 10, 1848.

J. F. WINSLOW, esq.

DEAR SIR: I called on Mr. Odiorne, of Boston, or rather Malden,
f. 808) and saw the machine with which he is making spikes. It is the same which Savery made for Gray, and which he (Gray) stopped using on my threatening him with a prosecution. I have ordered a prosecution to be commenced against Odiorne, unless he stops running the machine, and accounts for and pays me at the rate of $5 per ton for all he has made. I also paid my respects to Henry McFarlan, at Dover, on Tuesday last. He is driving one machine on hook-headed spikes. I set your friend Chandler, of Rockaway, to collect data for
f. 809) me, which, when I obtain, I will call Mr. McFarlan to account. I also called at Trenton yesterday to see what progress they had made there, but found nothing done in the way of spike making; it is just as I expected, mere anticipation. The person who is to make the spikes

and rivets has not completed the invention, or otherwise his patent. 449 The report is, he intends to make spikes and rivets direct from the mill, without reheating; a little too much; I have no fears of him. I leave for Washington this afternoon, to be absent but a very few days. I regret I had not more time to discuss matters the last time I saw you. f. 810) Have not learned how Judge Spencer is; his sickness seems to derange matters very much. As I shall want you to assist me at the trial, would be pleased to learn, on the receipt of this, whether you will have to go to Mount Savage again, and when. Address me a letter, Astor House, New York.

Yours, truly,

H. BURDEN.

Exhibit BB.

TROY IRON WORKS, *Feb'y* 15, 1847.

Mr. J. F. WINSLOW.

DEAR SIR: Your respective notes of this morning and evening are before me, and regret exceedingly I could not co-operate with you f. 811) about the wages puddling. Had I been favored with an 450 interview before you named the price to your men, I believe I could have dissuaded you from taking the stand. Labor, as you well know, is like other articles of merchandise, its price being regulated by supply and demand. I had no sooner posted up the notice than I began to inquire how a reduction was to be effected; and although I was then, and am now, as well convinced as you are, that the very reduced rates at which we shall be compelled to sell our goods the present season f. 812) from that of the past; puddling and all other wages ought to be reduced twenty instead of ten per cent., with a corresponding reduction in coal and pig iron. Nevertheless, it is my candid opinion if all the works now built and building are to be kept in operation, we shall be compelled to pay as high if not higher wages for at least a year to come, than we have for the year that is past; this appears to me to be inevitable. The number of puddling furnaces on the sea-board have been trebled within the last 18 months, while the number of workmen have f. 813) been by no means increased in the same ratio; and before 451 sixty days pass over, it is my opinion, there be more pulling and scrambling to get puddlers than there has been these many years. At the same time I hope I am wrong in this opinion, as the prospect of selling goods at a price which will warrant high wages is any thing but flattering. With such a prospect before me, I confess I see little hope of success in regulating the price of puddling while there are such a vast f. 814) number of conflicting interests both at home and abroad to defeat it. Seeing all my efforts, for more than a year past, have failed to induce you and your associates to co-operate with me in establishing rules and regulations for the sale of spikes, an article which we might control, and which, if gone into and carried out in good faith, could not fail to prove highly beneficial to all parties. Is this not true? If there

is any way in which I can co-operate with you and our brethren in the trade in reducing the price of wages, commensurate with the pre-
f. 815) sent and prospective price of goods, I should be most happy to, and to that end would like to see you, provided the interview were conducted in a spirit of charity towards each other's opinions; as 452 it is by pursuing such a course, only, we can ever hope to arrive at any harmonious and profitable co-operation. Time will not permit me to say any thing in relation to the sale of spikes at Boston and elsewhere for the year past; I am glad your attention has been drawn to the subject, and think that if we were to compare notes of our transactions respectively, in regard to the sale of spikes for nine months past, it would not fail to produce an arrangement that would greatly benefit all par-
f. 816) ties for time to come. Yours, truly,

H. BURDEN.

P. S. John McPhail reports that for some three weeks past you have been offering your puddlers the old price.

H. B.

Exhibit CC.

The United States Patent Office, (E pluribus unum,) to all whom these presents shall come, greeting: 453

This is to certify that the annexed is a true copy of Henry Burden's agreement with the Troy Iron and Nail Factory, received and recorded the 13th August, 1839, as compared with the records.

In testimony whereof, I, Edmund Burke, commissioner of patents,
f. 817) have caused the seal of the Patent Office to be hereunto affixed, this twenty-sixth day of July, in the year of our
[L. S.] Lord one thousand eight hundred and forty-eight, and of the independence of the United States the seventy-second.

EDMUND BURKE.

Articles of agreement made this second day of December, in the year one thousand eight hundred and thirty-six, between Henry Burden, of the city of Troy, of the first part, and the Troy Iron and Nail Factory of the second part. Whereas the said Henry Bur-
f. 818) den has, pursuant to the laws and by the authority of the laws of the United States of America, heretofore obtained sundry patents for new and useful inventions and improvements in ma- 454 chinery, as follows, to wit: A patent, bearing date the twenty-sixth day of May, in the year one thousand eight hundred and twenty-five, for a new and useful improvement in the manufacturing of wrought nails or spikes, solely by the aid of machinery, also one other pa- 455 tent, bearing date the second day of December, in the year one thousand eight hundred and thirty-four, for a new and useful improvement
f. 819) in the machinery for manufacturing wrought nails or spikes; also, one other patent, bearing date the twenty-third day of November,

in the year one thousand eight hundred and thirty-five, for a new and useful improvement in the machinery for making horse shoes. And whereas a number of machines for the manufacture of wrought nails and spikes, after the method invented and patented by the said Henry Burden, have, in pursuance of an agreement heretofore made between the parties to these presents, been constructed and used, and are still in use, upon the premises of the parties of the second part, in the sixth ward of the city of Troy, and machines for making horse shoes after f. 820) the method invented and patented by the said Henry have also been constructed and are now in use upon the premises aforesaid. And whereas it has been found inconvenient to keep separate ac- 456 counts in relation to the articles manufactured by the machines patented by the said Henry Burden, and the parties deem it to be for their mutual interest that the several branches of manufacturing carried on by the said parties of the second part at the place aforesaid should be managed as one individual concern, and the accounts be thereby simplified; they therefore have agreed, and do hereby mutually cove- f. 821) nant and agree, to and with each other, as follows, to wit: The said Henry Burden, party of the first part, doth hereby grant, bargain, sell, assign, and transfer, to the said parties of the second part, the several patents above specified for the manufacture of wrought nails or spikes by machinery, and for a new and useful improvement in the machinery for manufacturing wrought nails or spikes, and the sole and exclusive right to use the machines for manufacturing wrought nails or spikes, now on the premises of the said parties of the second part, and also the exclusive right to construct and use such other machines f. 822) for manufacturing wrought nails or spikes, after the method invented by the said party of the first part, with all the improve- 457 ments which he hath made or shall make in the same, in any other part of the United States, as the said parties of the second part shall deem expedient, during the terms for which the same are or may be patented by the said party of the first part.

And the said Henry Burden doth also hereby license and permit the said parties of the second part to use on their premises, in the city of f. 823) Troy, the machines for making horse shoes now on the said premises; and doth also license and permit them to construct and use upon the said premises, and not elsewhere, so many machines for making horse shoes, in the method invented by the said Henry, as the said parties of the second part shall deem expedient, with the right and privilege of using on said premises all improvements made or to be made by the said Henry in the machines or machinery for making horse shoes; this license to be in force during such time as the patent f. 824) or patents obtained by the said Henry shall be in force.

And the said Henry doth also covenant and agree, to and with the said parties of the second part, that if he shall discover or invent 458 any useful improvement in the machinery already patented to him for making and manufacturing wrought nails or spikes, or for making horse shoes, he will make application for a patent or patents therefor, and

endeavor to obtain the same; and whenever any improvement shall be made in the machinery for manufacturing wrought nails or spikes, or for making horse shoes, the license hereby granted to the party of f. 825) the second part shall be deemed to extend to all such improvements.

And the said Henry doth further agree and covenant, with the said parties of the second part, that he will not grant, bargain, sell, or assign his said patent for the manufacture of horse shoes by machinery, for any district or locality, nor license nor permit the erection or use of any such machines for the manufacture of horse shoes, in any part of the United States, to any person or persons whomsoever, until and unless the said parties of the second part shall have previously refused f. 826) to construct and use so many additional machines for the manufacture of horse shoes as it shall appear can be profitably and 459 beneficially employed in such manufacture.

And in consideration of the grants, covenants and agreements, licenses, and permission aforesaid, of the said Henry, the said parties of the second part do hereby covenant and agree, to and with the said Henry, his executors, administrators, and assigns, that out of all sums of money set apart, and out of which a dividend or dividends shall at any time or times during the period for which the said letters patent f. 827) shall respectively be in force shall be declared, and which shall at all times consist of net profits, they will pay to the said Henry thirty per cent. thereof; that is to say, thirty dollars out of every hundred dollars; and which sum or sums thus set apart for dividends shall be net profits of the entire business and manufacturing operations of the said parties of the second part, in all the branches carried on or to be carried on by them, from time to time, for and during the respective f. 828) times for which the respective patents aforesaid, or any improvements in them, or any or either of them, respectively, shall 460 be in force; the remaining seventy per cent., or seventy dollars of every one hundred dollars, to be be divided among the stockholders in the said Troy Iron and Nail Factory; the party of the first part to be entitled, at the time of the determination of this agreement, to thirty per cent. of the value of all the machinery for manufacturing wrought nails or spikes and horse shoes which shall then be on hand. And the party of the first part shall also be deemed interested in all real f. 829) estate to be purchased out of the earnings, and in the said additions and improvements in the like proportion; that is to say, of thirty parts in every one hundred undivided parts thereof; and upon the determination of this agreement, whether by expiration of the patents of the said Henry, obtained or to be obtained as aforesaid, or by dissolution of the said Troy Iron and Nail Factory, such real estate additions and improvements shall be valued by indifferent persons, one to be chosen by each party; and, in case of disagreement, the two so f. 830) chosen to elect an umpire, unless the said parties otherwise agree respecting them; and the share of the party of the first part, so

as ascertained, shall be paid to him, his executors, administrators, 461
or assigns.

And it is further mutually agreed between the parties to these presents, that this agreement shall be so construed as to be deemed to have been entered into and commenced on the first day of July, in the year one thousand eight hundred and thirty-five. And it is further mutually agreed between the said parties, that all previous agreements and con-
f. 831) tracts between them shall be deemed to be, and the same are hereby, rescinded and annulled. In testimony whereof, the said Henry Burden has hereto set his hand and seal, and the said Troy Iron and Nail Factory have caused their common seal to be affixed to these presents, the day and year first above written.

JOHN TOWNSEND, *Prest.* [SEAL.]
H. BURDEN. [SEAL.]

Sealed and delivered in the presence of—
TEUNIS VAN VECHTEN. 462

Exhibit DD.

TROY IRON AND NAIL FACTORY, *September* 4, 1844.

Mr. JOHN F. WINSLOW.

DEAR SIR: Peter tells me he has made arrangement with you that,
f. 832) until further notice, the price of ship and boat spikes shall be list prices less 30 per cent., and all railroad spikes (excepting hook-headed spikes) 5 cents per pound; consequently I have this day written all my agents to that effect. Messrs. Davis, Brooks & Co. have been negotiating, as I understand, with you as well as with me, about spikes for a railroad west. Having this moment written them that our price is 5 cents, you will please do the same should they apply to you; having received a letter from these gentlemen on Monday on the sub-
f. 833) ject, to which I did not reply till this morning. Please say whether you agree to the above. 463

Yours, truly, H. BURDEN, *Agent.*

P. S. I shall call on Mr. Van Rensselaer about the liberty to flow his land to-day. H. B.

Exhibit EE.

Mr. JOHN F. WINSLOW.

DEAR SIR: While perusing a copy of a letter from my father to you this morning, I perceive he has excepted hook-headed spikes, and in your reply to him you have noticed the same. This is to inform you we have put the price of hook-heads the same as other railroad spikes,
f. 834) and shall not take any contract for a less price, that you may depend upon. If we do, due notice will be given you by me. I pray you say as little about this unhappy subject as possible, for the sake of myself and one that is most dear to me, and doubt not that other mem-

bers of both families will join in saying the same. I hope never to see that subject agitated again, and shall not, if I can prevent it.

I remain, dear sir, very truly, yours, 464

P. A. BURDEN.

TROY IRON WORKS, *September* 4, 1844.

Exhibit FF.

TROY IRON AND NAIL WORKS, *September* 5, 1844.

Mr. JOHN F. WINSLOW.

DEAR SIR: Your favor of this date is received, and agree with you f. 835) in opinion that, in fixing the price at which we shall sell, our goods ought not to be limited to any one article, but include all sorts and kinds of our mutual manufacture now carried on at the respective works, and am therefore ready to meet you for the purpose of establishing a tariff of prices on all articles, except the one named in my note of this morning; the privilege to manufacture which, by machinery, being vested exclusively in the writer; and would here remark, that it matters not how you have or may vary the machinery (from that laid down in the patent) which bends the portion of iron f. 836) intended for the head, while it is gripped by the dies to be headed and pointed. The profit (if any) arising from the manu- 465 facture of hook-headed spikes, as laid down in the patent, belongs as much to me as the product of my garden or orchard.

Should you still be of a different opinion, and object to settling this unfortunate matter amicably, if we can, or, in case of the inability to settle it ourselves, to leave it to three disinterested persons mutually chosen, it must take the regular course of law which is now in pro- f. 837) gress. Would be pleased to have your determination on this point.

Yours, truly, H. BURDEN.

Exhibit GG.

SEPTEMBER 12, 1844.

DEAR SIR: Having sold little, with a prospect of having still less to offer for sale this fall, I have no regular prices for iron, steel, &c., &c. Should you have a list of prices which you deem proper for this meridian, I would be pleased to have a copy; also the price at which you slit horse nails and other rods.

I start for Martin's lake to-morrow morning. 466

Yours, truly, H. BURDEN.

Mr. J. F. WINSLOW.

Exhibit HH.

CUMBERLAND, *September* 29, 1844.

f. 838) Mr. JOHN F. WINSLOW.

DEAR SIR: On my passage hither from Baltimore, I have thought

much on the peculiar situation of our affairs, and fully appreciate your laudable desire to establish another and a better state of things, and beg you to be assured that nothing shall be wanting on my part to hasten the consummation of such a desirable object, and doubt not on my return (which shall not be prolonged) a few hours' conference will set all the social machinery in motion again, which I trust will continue to revolve and re-revolve without a jar.

Give my respects to Mrs. W. and love to daughter Susan, and tell f. 839) them I shall do myself the pleasure of making them a special visit on my return; and believe me to be yours, sincerely, 467

H. BURDEN.

P. S. Pay no attention to Mr. Staple's movements till I return. Should time permit I will call on Susan's father and mother on my return. See that the young folks' spirits are kept up till I return.

H. B.

Exhibit II.

OCTOBER 11, 1844.

Mr. JOHN F. WINSLOW.

DEAR SIR: By the enclosed you will perceive that I am compelled to go through with the suits now pending between myself and your company, and for which end I shall proceed to New York this afternoon, previous to which I should like to see you on the subject. If f. 840) you will call at my office on receipt of this, I will proceed with you to my house, or other private place mutually agreed on, for the purpose of consulting further on the peculiar position of our affairs.

Yours, truly, H. BURDEN.

Exhibit JJ. 468

TROY IRON WORKS, *January* 2, 1845.

Mr. J. F. WINSLOW.

DEAR SIR: Fully appreciating the sentiments contained in your esteemed favor of the 19th ultimo, and believing the commencement of a new year (the end of which neither of us may be permitted to see) a befitting time for settling all old difficulties, permit me therefore to f. 841) propose we have a friendly meeting for that purpose.

And to preclude the necessity of unnecessary correspondence, I propose the place my office, and time this evening after tea—say seven o'clock—and shall be pleased to learn whether the time and place will suit your convenience. Yours, truly,

H. BURDEN.

Exhibit KK. 469

JANUARY 6, 1845.

Mr. JOHN F. WINSLOW.

DEAR SIR: Your favor of the 2d ultimo came duly to hand, and

most cordially agree with you in opinion, that it is decidedly better to state on paper our respective grievances, when, after due deliberation, we f. 842) can assent or dissent, as the case may be; and with a view to that end I proceed, limiting, however, this epistle to a few remarks by way of answer to your note of the 14th ultimo, in relation to the recent injunction which I obtained against your company.

When in October last I agreed and did suspend, for the time being, the further prosecution of my claim against you, it was with the express understanding that you should simultaneously stop your lawyer from proceeding farther in the premises, and discontinue the manufac- f. 843) ture of hook-headed spikes until legally authorized so to do on the terms named to you at the time, and which I then understood to be satisfactory and agreed to by you; and in proof of its being so understood by me, I refer you to the fact that I immediately wrote 470 my attorney, Mr. Staples, to suspend further action in the premises; although within one week of the sitting of the court, before whom the cause was to be argued, thus hazarding and jeopardizing my claim in consequence of such postponement, should you fail to fulfil your part of the agreement, of which at the time I did not entertain a doubt of f. 844) the truth, of which my attorney as well as [my] family can attest. And am free to confess that the accidental journey we made together from Philadelphia to Baltimore, and from Washington back to the latter city, where this armistice was first proposed, was a source of no small gratification to me, to think that the time at last had arrived, when, to all appearances, our unneighborly (not to say unchristian) differences would thus be all amicably settled; and it was not until within one hour of the time appointed when your lawyer was to f. 845) make his motion for a writ of error before Judge Concklin, at Albany, did I know but you had, as promised, given him (Harris) orders to stay proceedings; and had it not (fortunately for me) happened that the court adjourned the day previous, your motion 471 would have been granted as a matter of course by default, which, I am informed by my lawyer, would have greatly prejudiced my cause. Thus the unexpected failure on your part to stay proceedings at law, and your subsequent refusal to recognise my rights to the spike machine, when interrogated on the subject at your house, left me no f. 846) alternative but to resume proceedings at law, however mortifying it was to have my hopes thus blasted after giving my friends to understand that the unfriendly feeling which had so long existed between us was about to terminate.

Should the above statement be incorrect in the smallest particular, be assured I shall lose no time in correcting the same on its being pointed out to me. Your answer, assenting or dissenting to all or any portion of this statement, is expected, and remain,

Yours, truly,

H. BURDEN.

Exhibit LL.

JANUARY 10, 1845. 472

Mr. JOHN F. WINSLOW.

f. 847) DEAR SIR: Your letter of the 7th came duly to hand, which should have received an earlier reply had time permitted. When I received your letter of the 2d instant, proposing that the points of difference between us should be put on paper, I deemed it due to myself to state, first, the reasons for my lately ordering proceedings at law to be recommenced, in consequence of the remarks thereto made in your letter of the 14th ult., wherein you seem to blame me, in no measured terms, for making application anew for an injunction.

f. 848) I repeat, that when I suspended proceedings I did it in good faith, that we should be able to settle our difficulties without again resorting to law, a business I cordially detest and abhor, as all who know me will bear testimony.

In your letter of the 7th you say that no man, living or dead, 473 ever heard you say that you would discontinue the manufacture of hook-headed spikes, and that you never entertained such intentions; one thing is certain, had I known your intentions then as clearly as I do now, I never should have agreed to discontinue, or rather postpone, the suit.

f. 849) The first suit was reluctantly brought to compel you to pay damages for using said machinery, contrary to my express and often repeated injunctions against your doing so; and the second for the avowed purpose of stopping you altogether. While this latter suit was pending, the interview between us, alluded to in my letter of the 6th, was had, which took place, as you will remember, on board the cars between Washington and Baltimore. The circumstances are these: that after a great deal of agreeable conversation about our difficulties, I asked you what could be done? You replied, that I might do whatever f. 850) my conscience dictated in the premises. I then told you distinctly that I had no desire to criminate, and would rather save you if I could, and gave you to understand that all I contended for was 474 my rights, and if they were respected all would go well; and named the terms at the time on which I might, at some future day, grant you a license to run the machinery in question. It is true you did not oracularly assent, neither did you dissent. Deeming a cessation of hostilities f. 851) on my part (I mean a resort to law necessary hostilities, and so deem all such appeals, and sincerely regret the necessity) all that was necessary to insure a satisfactory adjustment of the matter, after parting with you in Baltimore, and while on my way to Pittsburg, I became strongly impressed with the idea that you would do what was right in the premises, and wrote you a letter from Cumberland, stating that I would see you on my return; which promise I performed by calling on you at your house, and subsequently, the next day or day after, made f. 852) you a visit at your mill, for the express purpose of ascertaining

whether we really understood each other, and after putting this question distinctly to you, as you will doubtless remember, you replied in the affirmative, adding that you would respect my rights; when then and there we mutually agreed, in words, that all further proceedings at law 475 be suspended, and that we would each respectively instruct our lawyers to do so. I wish you expressly to understand that the above statement is not made with a view to criminate, but in vindication of the subject-f. 853) matter of my last letter, due to you as well as myself; and deeming this last misunderstanding (if misunderstanding it may be called) one of those "roots of bitterness" which you justly remark ought to be removed, where any thing of a considerable or desirable nature can be expected "to grow up or exist between us hereafter as neighbors and friends." I thought it proper to take this subject up and dispose of it first; and believing that what I have said will be sufficient to convince you of the purity of my motives in ordering proceedings at law to be recommenced, as however mech I may have misunderstood you in relation to your discontinuing the manufacture of hook-headed spikes, I f. 854) cannot be mistaken in regard to your agreeing to instruct your lawyer. On more mature deliberation, should you admit the substance of these two letters as correct, I will in my next lay before you my claim on your company.

Yours, truly,

H. BURDEN. 476

N. B. I will also proceed direct to point out my views of settling all old difficulties, and establishing rules to govern our future movements.

H. B.

Exhibit MM.

JANUARY 13th, 1845.

Mr. JOHN F. WINSLOW.

DEAR SIR: "If any thing of a commendable or desirable nature is ever to grow up and exist between us a[s] neighbors and friends, we f. 855) must remove first every 'root of bitterness;' and being disposed to do all that is in my power to do," I propose that all matters now in dispute between us be adjusted on principles of justice and equity, with as little delay as possible, "and whatever is for me to do, I assure you I shall not be backward in doing. I shall strive not to be outdone in any effort that has peace and good will for its object."

Yours, truly,

H. BURDEN. 477

The above paragraph I have copied from your letter of the 19th ult., f. 856) with the exception of one sentence, and propose that the same be adopted as a rule of conduct in the settlement of our affairs; and which if adhered to strictly, we cannot long remain at variance. Permit me, therefore, most respectfully to propose, that all our recent corre-

spondence on the subject be withdrawn, (or, to use a more modern phrase, "expunged,") and the above be substituted in its place. Having to leave home on a journey, Thursday or Friday next, I should be pleased to know whether the principles on which our differences are to be set-
f. 857) tled cannot be agreed on before leaving. Such a consummation would be taking our young friend by surprise on his return, which I look for daily.

H. B.

Exhibit NN.

JANUARY 15, 1845. 478

Mr. JOHN F. WINSLOW.

DEAR SIR: Your favor of the 13th is received, and [I] am truly glad to find we are now mutually bound to go forward in the good cause of settling our differences, and "having put our hands to the plough, let us not look back." I regret, however, that you should have thrown the task upon me of naming the way and the means by which this
f. 858) is to be accomplished.

The principal ground of contest being the validity of my claim to the spike machine, now the question arises, how is the matter to be settled? The rights of patentees is a subject in which I have ever felt deeply interested, having from a very early day trusted entirely to that kind of property for the support of my family, and fearing that a similar difference may arise about the extent of my right to the machinery for making horse shoes, from the fact that I have recently been informed that
f. 859) several of your men are now engaged in getting up ma- 479
chinery for that purpose, which I believe to be an infringement of my rights. I therefore propose, that we mutually agree to rely entirely on a legal decision of the spike case, believing, as I do, there are principles involved in it which have an important bearing on all my patented property and future prospects. If I have entertained wrong opinions of the right of patentees, I am anxious to be disabused on this point at as early a day as possible; and believing that the judges of the United
f. 860) States court are the only persons competent to decide this matter to our mutual satisfaction, (as unless it should be mutual I do not desire any decision,) I am willing to leave it to one, two, or three of the members of that body. Should you approve of this plan I will meet you this day, (being anxious to agree on this point before leaving home,) at any time and place you may choose to designate, for the purpose of settling preliminaries; and believe me to be,

Yours, truly,

H. BURDEN.

N. B. Will you favor me with a reply by the bearer, and oblige,

H. B. 480

Exhibit OO.

APRIL 14, 1845.

f. 861) Mr. JOHN F. WINSLOW: If convenient I should like to see

you at my office this evening at 7 o'clock, on private business. Let me know by the bearer your determination.

Yours, truly,

H. BURDEN.

Exhibit PP.

JULY 8, 1845.

Mr. JOHN F. WINSLOW.

DEAR SIR: I am anxious to know whether you do not deem the present as auspicious a period as any other, to adjust the expenses already incurred in improving the docks and channel, as well as the disposition of [the] dock now used jointly, and at the same time provide f. 862) for the farther improvement of the same. 481

It also occurs to me that the present is a very befitting time for doing something with Martin's lake. I saw Howland a few days ago, and learned something from him what they (Rankin and others) expect us to do; particulars when I see you. Please affix on a time and place to meet me to discuss the above mamed topics, particularly the former, being anxious that the matter be amicably settled.

Yours, truly,

H. BURDEN.

Exhibit QQ.

TROY IRON AND NAIL FACTORY,
July 11, 1845.

Mr. JOHN F. WINSLOW, AGENT, &c.

f. 863) DEAR SIR: Believing, as I sincerely do, that your company are daily deriving as much benefit from the improvements made by this company on the docks and channel as we are, I am anxious to know whether you will contribute and pay your share of the expenses or 482 not; I therefore repeat the offer I made you before going into the improvement. I am still willing to set apart a portion of our dock premises for your permanent occupancy, on condition that you pay a just proportion of the expenses incurred, and to be incurred, in improving f. 864) the same; provided, nevertheless, you make the election now. Your reply in writing is solicited, which will much oblige

Yours, truly,

H. BURDEN, *Agent.*

Exhibit RR.

JULY, 12, 1845.

JAMES HORNER, esq.

DEAR SIR: I send the enclosed, showing my views on the subject of [the] dock, and will thank you for a definite answer. When this is

arranged, there are other matters which require adjusting, and which you will doubtles agree with me ought to be done. When convenient, call, and would be pleased to exchange views with you on the subject before it be too late.

Yours, truly,

f. 865) H. BURDEN, *Agent.* 483

Exhibit SS.

TROY IRON AND NAIL FACTORY,
August 11, 1845.

Hon. ERASTUS CORNING.

DEAR SIR: I am now ready to meet you for the purpose of settling our differences, as proposed when I last saw you; and being called to Albany to-morrow afternoon on business, I will do myself the pleasure of calling on you to fix on the time and place for the meeting.

Yours, truly,

H. BURDEN.

Exhibit TT.

TROY IRON WORKS, *August* 30, 1845.

Hon. ERASTUS CORNING.

f. 866) DEAR SIR: I regret to say that Mr. Winslow is raising your nail factory dam so as to throw back-water on our wheel. The old dam, as originally built by John Brinckerhoof, in 1822, was raised as high as the law would allow him to do at the time, and as high 484 as we can permit. It occurs to me that something ought to be done to settle all old differences, and establish matters on a basis mutually beneficial to all. The timber not being yet fastened down, and may not be before some time on Monday, I think it would be well for you f. 867) to come up early on Monday morning. Let this communication be considered confidential. Did the raising of the dam not interfere with us, it is of no earthly object to him. The expense I have been at in raising our dam has done more to make the water steady than five feet would do on his dam. I trust you will be able to come up early; let me hear from you.

Yours, truly,

H. BURDEN.

Exhibit UU.

TROY IRON WORKS, *Feb'y* 24, 1844.

ERASTUS CORNING, esq.

f. 868) DEAR SIR: The public documents of the past and present legislature, relative to State prison labor, which you were so kind as [to] send me, have been received and attentively perused; and [I] do 485

hope the legislature will not change the labor of the convicts from their present employment to that of the making of iron; as it is derogatory to the character of the various mechanical professions now followed by convicts, can it be supposed for a moment that those respectable mechanics, now engaged in the manufacture of iron, will be less sensitive on the subject? Tell members from me that they will find it a more
f. 869) difficult task to reconcile a participation of State prison labor with those now engaged in the manufacture of iron.

In the present stage of matters between the representative of the Albany Iron and Nail Factory and myself, I deem it my duty to draw your attention to a few facts, in which you are deeply interested.

Presuming that however innocently you might have been drawn into the spike business, by that cunning, designing man, Wm. Osgood, you are now satisfied such interference was (to say the least) un- 486
generous and unfair, without first inquiring of me on what terms I per-
f. 870) mitted Mr. Hunt to erect said machine at your works, but more particularly unjust was Winslow's endeavor to wrest from me my latest improvement in that department; I mean the machinery for making hook-headed spikes, of which he has been recently convicted. Not satisfied by this peculation, (under the guise or authority from the Patent Office, which before a jury of his country will not avail him any thing,) he is about to embark in my horse-shoe business also; and I hereby forewarn you, that, although the plan he is now prosecuting is covered by two patents taken out in October, 1834, now in my posses-
f. 871) sion, he will certainly fail in making horse shoes by it, and before succeeding he will have to adopt a large proportion, if not all, the principles contained in my two patents of 1835 and 1843. As all other plans have been tried either in this country or in England, I therefore feel it my duty to caution you against any protestations which Winslow may make in relation to the manufacture of horse shoes, as be assured, if he ever succeeds it will be by the use of my patented machinery, which he cannot use with impunity.

f. 872) I expect to leave on Wednesday morning on a journey, 487
which before returning I shall be under the disagreeable necessity of instituting proceedings against Winslow, which necessarily and unavoidably involve the names of Mr. Horner and yourself; and shall be pleased to learn whether you are now willing to settle all differences growing out of the piracies committed on my inventions by your present authorized agent at the Albany works.

Yours, truly, H. BURDEN.

Exhibit VV.

BOSTON, *December* 15, 1845.

Mr. J. F. WINSLOW.

DEAR SIR: I had preferred having a long chat with you on Thurs-
f. 873) day evening, but in this I was grievously disappointed, in consequence of a press of business which engaged my attention till a

late hour, 10 o'clock; still anxious to see you, were it only to bid you and the babies good bye. I proceeded to Oak Grove, but from the profound stillness I presumed you were all fast asleep in the arms of Morpheus, consequently had to return home without the pleasure. 488

From what I learned from Gibson, I think the spike manufacture at Pittsburgh may be put a stop to very easily. Hunt, I understand, has got two machines going, but from the manner Cuddy treats him, f. 874) he would like to get back to Nail town. He wrote Gibson to know whether he would join him in taking out a patent for the machine as first proposed, and intimated a desire to leave Pittsburgh. The plan I would recommend is for you to see Gibson, (to whom I have this day written, as well as conversed with him on the subject before leaving) make an arrangement with him to take out a patent for the improvement, and purchase it for a small sum for our mutual f. 875) benefit; take Hunt back to the Albany works to work, and thus break up the nest at Pittsburgh; by such a course I think we might control the spike trade for many years, which by a hearty co-operation we might yet make money. Peter will see you on this and other matters, and carry out the arrangement with Gibson, should you 489 think best; you had better see to this soon; you may place confidence in whatever Gibson may do or say in the premises, having had a long interview with him on Thursday on the subject. David Defreest sat f. 876) some two hours in my office last Thursday, but was too chicken-hearted to moot the subject of selling his lands for a dam, for which I knew he came. I do think something may be done now to advantage; I will pay half the expense to obtain a dam, or rather pond, for our mutual benefit. Mr. Defreest has the map; before, however, closing with him, you must obtain Mr. Van Rensselaer's consent to sell the half acre we shall flow of his; it will flow back some 3 or 4 feet of his fall; do not moot the subject of his fall; say it f. 877) is some half an acre which may flow of his land on the stream, same as a small piece of Vandenburgh.

I would recommend your advertising and applying to the legislature for liberty to join our premises with Bumstead, Defreest, Richardson, &c., to Greenbush; our taxes are enormously high, and will continue to be so. Consult Peter about fixing the price of spikes; I would recommend 5 cents for railroad, and 30 per cent. from list prices 490 on all other kinds of spikes; when I say 30 per cent., I mean our f. 878) agents in New York, and elsewhere, are to pay us list prices less 30 per cent., and if any of my agents should be found selling at that rate, it would be just cause for you to suspect they had them from me on better terms; should you conclude to arrange this matter, I will see that my part is carried out to the letter. Should you not have already made out and sent up notes for the iron had of Beck & Kunnhordd, [1] will thank you to do so, as also payment for the soap stone had of Peter, leaving me to settle with Mr. Cooper for half the soap f. 879) stone had from him this fall; also see that McPhail and Gibson settle their borrowed brick, sand, &c., &c., as an old saying is, "short

accounts long friends." Hoping that the Albany iron works and the Troy iron works will not only make large dividends, but that the owners, particularly those residing in the 6th ward, will spend a happy winter, as I mean to do. Adieu.

Your friend, H. BURDEN. 491

N. B.—Remember me in kindness to Mrs. W.; not forgetting Susan.

H. B.

Exhibit WW.

TROY IRON WORKS, *October* 9, 1846.

Mr. JOHN F. WINSLOW.

f. 880) DEAR SIR: As named to you some time ago, I have 150 kegs spikes, made for the Harlaem railroad, but not delivered, prior to your getting the job, believing that you agreed with me in opinion, that under the circumstances you would take these 150 kegs and allow me 4½ cents cash, same as you sold that company; [I] shall be pleased to learn where and when I shall deliver them.

Yours, truly, H. BURDEN, *Agent.*

N. B.—I expect Mr. Pomeroy here this week to endeavour to sell f. 881) his pig iron. What is your opinion as to the price we ought to offer him? The 1st Dec. is near at hand.

H. B. 492

Exhibit XX.

TROY IRON WORKS, *January 7th*, 1847.

ERASTUS CORNING, esq.

DEAR SIR: A number of my friends, who are stockholders in the Utica and S. R. R., are urging me to make an offer to supply the company with spikes to relay their road. Believing, as I do, that our mutual interest will be best promoted by an agreement to state uniform prices at the highest rates which may ensure to us the contract, I f. 882) would be pleased to learn whether you coincide with me in opinion; and if so, I should like to know your views as to the prices we ought to charge.

Yours, truly, H. BURDEN, *Agt.*

Exhibit YY.

TROY IRON WORKS, *April* 1, 1847. 493

In the summer of 1844 Mr. Winslow and myself engaged L. D. Eddy to survey that portion of A. W. Defreest's land which is now flowed by the dam built last fall, with a view to purchasing for a reservoir. After the survey was completed, I made a contract with Mr. Defreest for the land, on condition that Mr. Winslow approved of

the price. Mr. Winslow declining, annulled the contract. In the
f. 883) summer of 1845 I raised my dam some 3 to 5 feet, which served to some considerable extent as a reservoir, which proved to be of great benefit to our respective works. The raising of this dam caused the water to flow back on Defreest's property, which under the pretence of injuring him he ordered the dam to be lowered, in default of which he would commence a prosecution, leaving me no alternative but to purchase, which I did. Mr. Winslow approved of the purchase, and agreed to pay half the cost of the land and improvements,
f. 884) and requested that I should superintend the building of the dam, during the progress of which he frequently visited the work during its construction, and seemed pleased with what was going on. The dam was finished I think on Saturday, and on the Monday 494 following I called on Mr. Winslow for the purpose of settling the account and obtaining from him his half of the expense, but to my utter astonishment, and before I had time to introduce the subject, he broke out and abused me in the most infamous manner, and closed by declaring he should have nothing to do with it. This outbreak took place in the presence of Mr. Horner, and which was followed a few
f. 885) days afterwards by his (Winslow's) threatening me with a prosecution, to account for which I was utterly at a loss, unless it was to get rid of paying what he agreed to pay, although he well knew he could not fail to receive all the benefit from the improvement which we (the Troy Iron Works) did. Since then I have not asked him to do any thing in the premises, but have paid the money and taken the deed in our own name, and for our especial (the T. I. & N. F.) benefit. 495
f. 886) Last spring, when Mr. Winslow and myself agreed to divide the order for spikes for the Housatonic R. R., it was then agreed that in future, and until we mutually agreed to change, the price of hook-headed spike should be 4¾ cents, and countersunk spikes 5 cents. To this agreement I adhered (I believe) through the entire season, while Mr. Winslow almost immediately sent a proposition to Mr. Brodhead, of the Hartford and New Haven R. R., offering to supply him
f. 887) at 4½ cents; also Mr. Harriss of the Western and others, while by agreement with Mr. W. I offered to make the same spikes at 4¾ cents; in consequence of thus deceiving me I lost this and other orders, and never knew or suspected any such thing for months afterwards.

Very respectfully, I am, yours, &c.,

H. BURDEN,
Agent for Troy I. & N. Factory.

To Messrs. E. Corning & Co.

N. B.—Should Mr. Winslow deny that he agreed to the purchase of the land and building the dam, I am ready to prove by A. W. 496 Defreest, and the trustees of school district No. 7, and others, that he (Winslow) negotiated with said trustees to give them land for a site for
f. 888) a school-house from the very property alluded to.

H. B.

Exhibit ZZ.

At a meeting of the trustees of the Troy Iron and Nail Factory, held on Thursday, the 5th of August, 1847.

On motion of Mr. Backus, seconded by Mr. F. Townsend, it was unanimously resolved that Mr. John Townsend be the agent of this company to manage its concerns, and discharge all the duties and exercise all the powers of said office until further order of this board. And also that a copy of the foregoing resolution be signed by the pre-
f. 889) sident and secretary, and transmitted to all parties having dealings with this company.

(Signed) JOHN TOWNSEND, *President.* 497

FRANKLIN TOWNSEND, *Secretary pro tem.*

Dated Albany, August 5th, 1847.

SIR: By the above circular you will be informed that I have been duly appointed agent of the "Troy Iron and Nail Factory." You will please address your communications hereafter to John Townsend, agent Troy Iron and Nail Factory, Troy, N. Y.

Yours, respectfully,

JOHN TOWNSEND,

Agent Troy Iron and Nail Factory, August 31, '47.

It is not true that John Townsend was elected agent of the Troy
f. 890) Iron and Nail Factory. I am the agent and owner of nearly two-thirds of the said T. I. & N. F., to whom address your communications as heretofore, and forbid your transacting any business with John Townsend as such agent.

Yours, truly, H. BURDEN.

Exhibit AB. 498

Whereas letters patent were granted to Elisha Tolles, on the twenty-fourth day of October, 1834, for a machine for making or turning horse shoes; and whereas the said Elisha Tolles, previous to obtaining said letters patent, did assign and convey to Nathaniel B. Gaylord the
f. 891) undivided half of his interest in the said patent; and whereas the said patent having been lost, a new patent was issued to the said Elisha Tolles on the third day of May, 1844.

And whereas the said Elisha Tolles and Nathaniel B. Gaylord, being joint owners of the said patent rights and privileges, have this day assigned, sold, and conveyed the same to James Horner and John F. Winslow, and have received therefor the sum of one thousand dollars, six hundred and twenty-five dollars of which sum has been received by the said Nathaniel B. Gaylord, and three hundred and seventy-five dollars by the said Elisha Tolles. Now, therefore, we, the said Elisha Tolles and Nathaniel B. Gaylord do covenant and
f. 892) agree with the said James Horner and John F. Winslow, each for himself and not one for the other, that in case it shall at any 499

time hereafter appear, by the decision of any court having competent jurisdiction, that the said patent so conveyed to the said James Horner and John F. Winslow is not valid and effectual to secure to the said James Horner and John F. Winslow the exclusive privileges thereby granted, whether for the reason that the said Elisha Tolles is not the original inventor of the said machine or otherwise, that then the said f. 893) Nathaniel B. Gaylord shall refund to the said James Horner and John F. Winslow the said sum of six hundred and twenty-five dollars, with interest thereon from the time he shall receive the same; and the said Elisha Tolles shall refund to the said James Horner and John F. Winslow the said sum of three hundred and seventy-five dollars, with interest from the time he shall receive the same; but the said Nathaniel B. Gaylord and Elisha Tolles are not to be responsible for the moneys received by each other, except that the said Nathaniel B. f. 894) Gaylord guaranties that the said Elisha Tolles shall refund one hundred dollars of the moneys so as aforesaid received by him, 500 with the interest thereon, in case he shall become liable to do so as herein before provided.

In witness whereof the said Elisha Tolles and Nathaniel B. Gaylord have hereunto set their hands and seals, this eighteenth day of May, 1844.

ELISHA TOLLES,
NATH. B. GAYLORD.

In presence of, as to both—S. O. SHEPARD.

Received, Albany, May 18, 1844, six hundred and twenty-five dol- f. 895) lars of John F. Winslow, in pursuance of the terms of the foregoing instrument.

NATH. B. GAYLORD.

Received, Albany, May 18, 1844, of John F. Winslow, three hundred and seventy-five dollars, in pursuance of the terms of the foregoing instrument.

ELISHA TOLLES. 501

Exhibit AC.

Whereas a patent was granted to Elisha Tolles, on the twenty-fourth day of October, 1834, for a machine for making or turning horse shoes; and whereas the said Elisha Tolles, on the fourth day of August, 1834, in consideration of one hundred dollars to him paid by f. 896) Nathaniel B. Gaylord, did grant, bargain, and sell, unto the said Nathaniel B. Gaylord, one-half of his right, title, and interest in the said machine, so as aforesaid invented by him, and of all the rights and privileges to be secured to the said Elisha Tolles by letters patent, from the day on which said letters patent should be granted to the expiration of the time for which they should issue, the said letters patent to be thenceforth the joint property of the said Elisha Tolles and Na-

thaniel B. Gaylord; and all the profits and emoluments which should
f. 897) be derived therefrom, to belong to them mutually, share and
share alike. 502

And whereas the said letters patent so as aforesaid granted to the said Elisha Tolles having been lost, a new patent was in due form of law granted to the said Elisha Tolles for the said machine, bearing date the third day of May, 1844, granting to him, the said Elisha Tolles, his heirs, administrators, and assigns, for the term of fourteen years from the said twenty-fourth day of October, 1834, the full and exclusive right and liberty of making, constructing, using, and vend-
f. 898) ing to others to be used, the said machine.

Now, therefore, in consideration of one thousand dollars, in hand paid to the said Elisha Tolles and Nathaniel B. Gaylord, by James Horner and John F. Winslow, the receipt of which is acknowledged, the said Elisha Tolles and Nathaniel B. Gaylord do hereby grant, bargain, and sell, to the said James Horner and John F. Winslow, and their executors, administrators, and assigns, all and singular the rights and privileges so as aforesaid secured by letters patent, with the full and exclusive right and liberty of making, constructing, using
f. 899) and vending to others to be used, the said machine so patented, as fully and absolutely as the same are vested in the said Eli- 503
sha Tolles and Nathaniel B. Gaylord, by virtue of the said letters patent so issued as aforesaid, and the said assignment executed by the said Elisha Tolles to the said Nathaniel B. Gaylord; to have and to hold the same to the said James Horner and John F. Winslow, and their executors, administrators, and assigns, for their sole use and benefit, during the residue of the said term of fourteen years. And the said
f. 900) Elisha Tolles and Nathaniel B. Gaylord do also, for the consideration aforesaid, sell, assign, and transfer, to the said James Horner and John F. Winslow, all claims which they have against any person or persons whatever for any infringement or violation of the exclusive rights and privileges secured by the said letters patent as aforesaid, and all damages which may be recovered on account of any such infringement or violation; and the said Elisha Tolles and Nathaniel B. Gaylord do hereby authorize and empower the said James Horner and John F. Winslow, in their name, or the name of either of them, or
f. 901) otherwise, to commence any suit or suits, or any other legal proceedings for the recovery of damages against any person or per- 504
sons who may have infringed or violated the said patent rights and privileges; and to receive for their own use and benefit any moneys which may be recovered in any such suit or proceeding, they the said James Horner and John F. Winslow indemnifying and saving harmless the said Elisha Tolles and Nathaniel B. Gaylord of and from all costs and charges to which they may be subjected by reason of the commencement or prosecution of any suit in their name.

f. 902) And the said Elisha Tolles and Nathaniel B. Gaylord do hereby covenant and agree, with the said James Horner and John F. Winslow, that they are the legal owners of the said patent rights and privi-

leges hereby conveyed, and that they have good right to grant and convey the same, and that the same are free from all encumbrances thereon.

In witness whereof the said Elisha Tolles and Nathaniel B. Gaylord have hereunto set their hands and seals, the eighteenth day of 505 May, one thousand eight hundred and forty-four.

ELISHA TOLLES,
NATH'L B. GAYLORD.

Sealed and delivered in presence of—
S. O. SHEPARD.

f. 903) STATE OF NEW YORK,
City and county of Albany, ss.

On the eighteenth day of May, 1844, personally came before me, the subscriber, Elisha Tolles and Nathaniel B. Gaylord, to me known to be the persons named in, and who executed the foregoing indenture, and severally acknowledged that they executed the same.

R. S. G. BANCROFT,
Com'r of deeds.

Exhibit AD.

(Copy) *January 7th*, 1845.

Mr. HENRY BURDEN.

DEAR SIR: Your letter of yesterday was handed me a few hours since. I confess I feel some surprise at its contents. You say, among f. 904) other things, that "I agreed with you (recently) to discontinue making hook spikes." Now I assert that no man, living or dead, ever heard me say, or agree to, any such thing; and I here repeat, that I never entertained any such intention, and how you became 506 possessed of the idea which you seem to have upon this point, I do not know. In the matter of directing Mr. Harris to suspend further proceedings at law, I once gave you a long and (as I know) a sincere explanation of all the circumstances thereto pertaining. If that was not f. 905) satisfactory to you, then I have nothing new to add. You seem to have received that explanation in a spirit unfavorable to me, and in your letter of yesterday prejudge my motives, and infer that my intention was to act treacherously; of course you are entitled to your judgment of the case, but I will only say that you do me wrong and injustice. One word more, and I have done. I wrote you on the 2d, proposing that the points of difference between us should be specifically put upon paper, and submitted to the deliberation of each of us, with a view to a reconciliation of all difficulties. This I proposed, be- f. 906) cause it appeared to me as the most manly and business like. You reply, stating that you "cordially approve of the plan," &c.; but, instead of proceeding according to "the plan," you write me a long 507 letter, filled with charges against my actions, and arraigning my motives, and animadverting in no very kind spirit thereupon. Now this is no

way, in my judgment, to conciliate and settle matters. It is a very good way to exasperate and offend, and make wider the breach between us. Now, I protest against this course; and if we cannot approach the proposed task without indulging in mutual criminations, I will f. 907) have nothing to do with it. "Bye-gones" must be "bye-gones," and it is for us to determine whether those "bye-gones" shall be the standards of action for the future. I am, yours, truly,

(Signed) JOHN F. WINSLOW.

Exhibit AE.

TROY, *January* 13, 1845.

Mr. HENRY BURDEN.

DEAR SIR: Your note of Saturday came regularly to hand, and I now find time to answer it. I am glad to perceive that you do me the justice to correct the statement made in your letter of 6th inst. As 508 to my having "agreed to discontinue the making of 'hook spike,'" f. 908) certainly I never authorized any one to entertain such a supposition. You say, "had I been so explicit" when we journeyed together between Philadelphia and Washington, you "would never have directed your lawyer to discontinue proceedings at law," &c. If I was not as explicit as you wished, it was because you did not at that time inquire directly what my intentions were in the premises; and I did not volunteer expressing of them, for the simple reason that I do not consider it becoming to intrude matters of dispute and difference f. 909) upon all occasions and in all places; to say the least, such a course would be in bad taste, if not a wanton disregard of good feeling and the common proprieties of friendly intercourse. But surely you have not forgotten that you called upon me at my office, several days before either of us started upon this journey, and I then told you distinctly, and with some emphasis too, I believe, that I did not intend to discontinue making these spikes; and I am not aware that I have at any time, when directly applied to upon the subject, been at all back- f. 910) ward in announcing my purposes and intentions there- 509 upon. I remember well your calling upon me after your return from that journey, and your questioning me as to my views of all that you had said concerning your (spike) right, and I as well remember my reply to you; and it was, "that I respected the view you took of your rights, and that I did not feel inclined to disturb or gainsay them." This is what I did say, "verbatim." I notice what you say in your letter about your having told me (when together between Philadelphia f. 911) and Washington) that you "might at some future day grant me a license to run the machinery in question." Now, I cannot say whether you did or did not thus name the "terms," as you style them, upon which we were in future to "dwell in the bonds of peace and brotherhood;" but if you did, I will lay a wager that the proposal made me smile. But, pray, how long is this "weight of words" to continue? We have already exchanged some half-dozen long letters, and we have

not yet arrived at the commencement of the "plan" as proposed 510
f. 912) in my note of 2d. If the subject is to bear the usual propor-
tion to the "preliminaries," it will be of almost interminable length,
not to speak of the expenditure of time, paper, &c., it will occasion;
but you intimate that in your next you will proceed to specify the dif-
ferences between us, and propose a course for the future. Waiting
which, I remain yours, truly,

(Signed) JNO. F. WINSLOW.

Complainant's exhibit, No. 2.

TROY IRON WORKS, *April 14th*, 1838.

Hon. H. L. ELLSWORTH.

DEAR SIR: Inclosed I send you $20, as part payment of the
f. 913) amount required by law, consequent to taking out a patent for
an improved machine for making wrought nails and spikes.

The object of this communication is to state that I have invented 511
and constructed a machine for the above named purpose, and which is
now in operation at these works. And having, from the commence-
ment of its construction, publicly declared my intentions of securing
the benefit of the same to myself, &c., &c., in accordance with the
laws of the U. S. relative to patents. And as soon as I can prepare
the necessary drawings, models, &c., I shall forward $10 more,
f. 914) preparatory to taking out a patent for the same; in the mean
time I will thank you to file this declaration in the archives of the Pat-
ent Office, as evidence of my intentions. And should any other appli-
cation be made for a patent for a machine for said purposes, prior to
f. 915) my furnishing the drawings, &c., you will please let me know,
and I will forward the same with as little delay as possible; or if you
think proper, you may refer the applicant to my machine now in oper-
ation. Under any circumstances, I shall lose no time in forwarding
the necessary papers, &c., as also several other patents to be recorded,
which were destroyed by the burning of the Patent Office.

Please acknowledge this by return mail; and should you have 512
copied the patent last sent, you will also be pleased to record the origi-
nal, as it is necessary I should have it before making out the papers,
&c., for a patent for the application of heading box therein named to
the making of bolts and rivets.

f. 916) Very respectfully, your obedient servant,

H. BURDEN.

PATENT OFFICE, 19*th August*, 1841.

This certifies that the foregoing is a true copy of the original on file
in this office.

[L. S.] In testimony whereof I have caused the seal of the Patent Office
to be hereunto affixed.

H. L. ELLSWORTH,
Commissioner of patents.

Complainant's exhibit No. 3.

To the Commissioner of Patents.

The petition of Henry Burden, of the city of Troy, county of 513
Rensselaer, State of New York, respectfully represents: That your pe-
titioner has invented or discovered a new improved machine for the
f. 917) purpose of making wrought nails and spikes, which has not,
as he verily believes, been before used or known; and that he is desir-
ous that letters patent of the United States may be granted to him there-
for, securing to him, and to his legal representatives, the exclusive
right of making and using, and of vending to others the privilege to make
or use the same, agreeably to the provisions of the act of Congress in
that case made and provided, he having paid thirty dollars into the
Treasury of the United States, and complied with other provisions of
the said acts. H. BURDEN.

f. 918) Washington, *April* 18*th*, 1839.

District Columbia, *Washington county, ss.*

On this eighteenth day of April, 1839, before the subscriber, a jus-
tice of the peace in and for the said city, personally appeared the with-
in named Henry Burden, and made solemn oath according to 514
law, that he verily believes himself to be the original and first inventor
of the within described machine for making wrought nails or spikes,
and that he does not know or believe that the same has been before
used or known; and that he is a citizen of the United States.
f. 919) C. H. WILTBERGER, *J. P.*

S.—Henry Burden, town of Troy, county of Rensselaer, State of New York, wrought nail and spike machine, received April 18, 1839. Petition, affidavit, specification, drawing, model, received. Treasurer's certificate, caveat $20, and $10 Bu. examined. Issue patented, , 183 . Recorded vol. , page .

C.—Sp. and dr. returned June 1, 1839. Notified to send papers on by the 1st Monday in July next. Supposed interference with John McCrone.

Interference with two applications by Richard Savery and John Mc-
f. 920) Crone,—hearing, 2d Monday in October next. Notice 515
given July 22d, 1839.

Postponement to 1st Monday in December next.

Priority of invention in favor of H. Burden, December 17, 1839.

Limit of appeal, second Monday in January, 1840. Sp. and dr. returned Dec. 17, 1839.

No. 1757. Henry Burden, town of Troy, county of Rensselaer, State of New York, wrought nail and spike machine, received April 18, 1839. Petition, affidavit, specification, drawing, model, received. Treasurer's certificate received. Examined, Charles M. Keller, Aug.
f. 921) 19, 1840. Issue, J. W. Hand patented Sep. 2d, 1840, ante-

dated March 2. Recorded, vol. 12, page 181, 1840. Improvements in the machine for making hook or brad-headed spikes.

Complainant's exhibit No. 4. 516

UNITED STATES CIRCUIT COURT,
Northern district of New York.

ERASTUS CORNING, JAMES HORNER, & JOHN F. WINSLOW } ads. HENRY BURDEN. }

NORTHERN DISTRICT OF NEW YORK, *ss.*

John F. Winslow, one of the above named defendants, being duly sworn, says: That although it is true that the defendants are engaged in the manufacture of hook-headed spikes, at their factory in the city f. 922) of Troy, yet it is not true that the said spikes are manufactured by the use of the improvement described in the patent of the said complainant, or in the violation of any rights secured to the said complainant by the patent set forth in the said complainant's bill of complaint; on the contrary, this deponent avers, that the said hook-headed spikes are made by the said defendants by a process entirely different in principle and mode of operation; and that in such manufacture the bending lever described by the said complainant in his said patent, and in f. 923) the construction and use of which the said improvement 517 claimed by the said complainant, and for which he obtained his said patent, consists, is not used at all, but the hook-head of the spike is formed by means entirely different from and unlike those described in the said complainant's specification. And this deponent further says, that the machinery used by the said defendants in making hook-headed spikes as aforesaid is wholly different in principle and mode of operation from that used by the said defendants, at and before the time of f. 924) bringing the suit by the said complainant against the said defendants, as set forth in the said bill; and is also entirely different in principle and mode of operation from the machine used by the complainant in making hook-headed spikes. And further this deponent saith not.

JOHN F. WINSLOW.

Sworn, the 25th day of November, before me,
CHARLES HOOPER, 518
Clerk of Rensselaer county, N. Y.

United States circuit court, northern district of New York.

ERASTUS CORNING, James Horner, & John F. Winslow } ads. HENRY BURDEN. }

NORTHERN DISTRICT OF NEW YORK, *ss.*

Thomas Osgood and Israel Blanchard, both of the city of Troy, be-

f. 925) ing severally duly sworn say, and each for himself says, that he has been engaged in the factory of the defendants for several years last past, and is well acquainted with the machinery and process used by the defendants in the manufacture of hook-headed spikes, and these deponents were also each well acquainted with the machinery and process used by the defendants in the manufacture of hook-headed spikes at and before the time when the defendants were prosecuted by the complainant for a violation of his patent in making said hook-headed f. 926) spikes; and these deponents are also each well acquainted 519 with the improvement claimed by the said complainant to have been invented by him, and for which he obtained a patent for making hook-headed spikes; and these deponents say, and each for himself says, that the machinery used by the defendants in manufacturing hook-headed spikes differs materially and entirely from the machinery described by the said complainant in his said patent, and also from the machinery used by the said defendants at and before the time of the commencement of the said suit; that the process by which the hook-head is formed f. 927) is entirely new and different in principle, and the bending lever described by the said complainant in his patent, and in the use of which his said improvement for which he obtained a patent consists, is not used at all by the defendants; and in the opinion of these deponents, the complainant's patent is in no way or manner violated by the manufacture of hook-headed spikes in the mode in which they are now made by the defendants.

THOMAS OSGOOD, 520

his

ISRAEL ⋈ BLANCHARD.

mark.

Sworn, the 25th day of November, 1844, before me,

CHA'S HOOPER,

f. 928) *Clerk of Rensselaer county, N. Y.*

I hereby certify, that Israel Blanchard signed the annexed deposition by making his mark, for the reason, as he alleged, that he could not write his name; and he also stated that he knew the contents of the deposition, having heard it read.

Troy, Nov. 25, 1844. CH'S HOOPER,

Clerk of Rensselaer county.

Complainant's exhibit No. 5.

The United States of America, to all to whom these letters patent shall come: 529

Whereas Henry Burden, who has resided in the United States two years, hath alleged that he hath invented a new and useful improve-
f. 929) ment in the machine for making horse shoes, which improvement he states has not been known or used before his application; hath made oath that he does verily believe that he is the true inventor or discoverer of the said improvement, and that the same hath not, to the

best of his knowledge and belief, been previously used or known in this or any foreign country; hath paid into the treasury of the United States the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the Secretary of State, signifying a desire of obtaining f. 930) an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Henry Burden, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-third day of November, one thousand eight hundred and thirty-five, the full and 522 exclusive right and liberty of making, constructing, using and vending to others to be used, the said improvement, a description whereof is given in the words of the said Henry Burden himself, in the schedule hereunto annexed, and is made a part of these presents.

f. 931) In testimony whereof I have caused these letters to be made patent, and the seal of the United states to be hereunto affixed.

Given under my hand at the city of Washington, this twenty-third day of November, in the year of our Lord one thousand eight [L. S.] hundred and thirty-five, and of the independence of the United States of America the sixtieth.

ANDREW JACKSON.

By the President:
JOHN FORSYTH,
Secretary of State.

CITY OF WASHINGTON, *to wit:*

I do hereby certify, that the foregoing letters patent were delivered to f. 932) me on the twenty-third day of November, in the year of our Lord one thousand eight hundred and thirty-five, to be examined; 523 that I have examined the same, and find them conformable to law; and I do hereby return the same to the Secretary of State within fifteen days from the date aforesaid, to wit, on this twenty-third day of November, in the year aforesaid.

B. F. BUTLER,
Att'y Gen. of the United States.

The Schedule referred to in these letters patent, and making part of the same, containing a description, in the words of the said Henry Burden himself, of his improvement in the machine for making horse shoes.

Be it known that I, Henry Burden, of the city of Troy, county of f. 933) Rensselaer and State of New York, hath invented new and useful machinery for the purpose of making horse shoes, do hereby declare the nature of my said invention, and the manner in which the same is to be carried into effect are fully described and ascertained in and by the following descriptions thereof, reference being had to the drawings hereunto annexed, and to the figures and letters marked therein, that is to say:

SHEET No. 1. Fig. 1. Section and birds-eye view of the ma- 524
chine for rolling, drawing, or shaping the horse shoes; *a a a a*, station-
f. 934) ary or outside frame; *b b b b*, feet which support the same; *c*,
the fly wheel; *d*, the connecting rod; *e e*, the crank; *f f*, the moving
frame; *g*, the rack, having cogs in it, which is bolted into the moving
frame, and which mashes or fits into the segment *h*, having long cogs
as seen at *h*. Fig. 2, *h*, the lower or under segment which is fastened
into the rollers *i* as seen at *i*. Fig. 2. *i i*, end view of roller as seen at
i i. Fig. 2. *k*, the moving jaw; *l l*, the side steels or irons, between
f. 935) which the piece of iron is confined on the sides while it is drawn
or rolled by the swedges *D D*, having steels or swedges *E E*, the ex-
act thickness of the shoe intended. It will be observed that one of these
side steels or irons is fastened into the moving jaw *k*, by means of screw
bolts, while the other is similarly fastened into the moving frame *f f*;
m, a button or cam, which when the moving frame *f f* is moved or
drawn backwards and forwards by the crank *e*, through the connecting
f. 936) rod *d*, it strikes against the pin or stop *n*, which permits the
button or cam *o* to push back or open the moving jaw *k*, when it 525
strikes against the pin or stop *P*, on the other side of the stationary
frame, by which means the piece of iron, which may be between the
side steels or irons, and which is drawn or rolled to the shape desired,
is permitted to drop out. *Q*, a pin or stop, which when the cam *o*
strikes against it on the moving frame's return motion, permits the cam
f. 937) *m*, when it strikes against the pin or stop *r*, to close the moving
jaw *k*. It will be observed, that when the moving frame *f f* has per-
formed its forward motion, the cam *m* strikes against the stop *n*, which
permits the cam *o* to open the moving jaw *k* by striking against the
stop *P*, which allows the piece of iron, which may have been rolled or
shaped to a horse shoe, to drop from between the side steels or irons *l l*.
S, a chisel fastened by screw bolts on the top of the side steel or iron
f. 938) *l*; *t*, a chisel fastened by screw bolts in the chisel box, *u u u*.

It will be observed that the box *u u u* turns on a pin in the moving frame, which when the crank pushes back the moving frame, the head or box part strikes against the pin or piece of iron *w*, and presses up the chisel *t* against the chisel *s*, and cuts off the piece of iron to the length intended for a horse shoe; *v*, a piece of iron intended to draw back 526
f. 939) the chisel box *u u u*, as seen at sheet No. 2, fig. 1. XXXX, trasses on which the moving frame slides backwards and forwards; *y*, a piece of iron to lay the bar on as a guide, while in the act of feeding into the machine.

L L, end view and section of the parts through which the rollers *i i* are fastened and revolve. A, piece of iron or stop which graduates the length of the shoe. B, piece of iron having a hole in it, through which the iron or stop A passes, which graduates the length of shoe. C, the
f. 940) piece of iron which prevents the shoe from being drawn back by the chisel on the side steel *l*, previous to the swedges pressing against it.

Fig. 2. Section and elevation of said machine for drawing, rolling, or shaping horse shoes; *h*, segments which are fastened into the 527

rollers *i i*; *g*, the rack which mashes or works into the upper segments; *h*, the cogs of which being twice the length of the under segment *h*, permits the rack to operate into it; which when pushed backwards and forwards by the moving frame *f f*, the whole is put in motion; *i i*, the
f. 941) rollers into which the segments with cogs *h h*, and swedges D D, with pieces or swedges E E are fastened; *k*, the moving jaws; *l l*, the side steels or irons between which the piece of iron is held while it is rolled or drawn by the vertical swedges D D, and steels or swedges E E, to the desired shape or shoe. It will be perceived that the rollers *i i*, revolve on gudgeons or centres F F F F; L L, posts or stationary frame into which the rollers *i i* are fastened and revolve.

f. 942) SHEET No. 1. Fig. 2. Elevation of machine for rolling, drawing, or shaping horse shoes; *a a*, the stationary or outer frame; *b b*, the feet which support the same; *c c*, the fly wheel; *d*, the connecting rod; *e*, the crank which gives motion to the machine, as seen at No. 1, 528 fig. 1; *h h*, segments of a circle fastened into the rollers *i t*, as seen at No. 1, fig. 2; *i i*, the rollers in which are fastened the segments *h h* and swedges D D, with the pieces of steel or swedges E E, which rolls or tapers the piece of iron intended for a horse shoe, as seen at E E, E D,
f. 943) No. 1, fig. 2; *u u*, box which contains the chisel which cuts off the piece of iron intended for the shoe; *v*, a piece of iron which is intended to draw back the chisel or cutter box as it passes along by means of a pin *g*, fastened into said chisel or cutter box, as seen at *v* No. 1, fig. 1; *y*, a piece of iron or guide to lay the bar on while in the act of cutting into lengths for horse shoes; *p*, a pin or stop, fastened into the stationary frame, against which the button or cam *o* strikes, as
f. 944) seen at *o*, No. 1, fig. 1, 2; *a*, pin fastened into the stationary frame against which the button or cam *o* strikes, as seen at No. 1, fig. 1; Z, the part into and through which the roller gudgeons pass and revolve.

Fig. 2. Section and elevation of the machine for rolling, drawing, or shaping horse shoes; *ii*, the roller in which the swedges with the pieces 529 of steel or swedges E E are fastened; *l l*, one of the side steels or irons. H, represents a piece of iron as being formed into a horse shoe. It
f. 945) will be readily perceived that by grinding the steels or swedges E E, any shape or taper required can be given to the piece of iron or shoe marked H. It will be observed, the four views or figures as above described represent the part or parts of machinery for cutting off, rolling, or drawing the iron into the shape required for horse shoes, and that fig. 1, No. 1, is a section having the upper roller *i* removed, for the purpose of showing more distinctly the interior arrangements of the machine.

Fig. 3. Section and elevation of machine for grooving and punch-
f. 946) ing horse shoes. *ii*, the rollers; D D, the swedges, the under one which is cast iron, or may be fitted with steel swedge similar to those used for rolling or shaping the shoe, as seen at D D, E E, fig. 2 of No. 2, the edge of which being similar to the flat side of a horse shoe; the upper one is also cast iron, so constructed as to fasten in two 530

pieces of steel under the covers or caps *i i*. These pieces of steel are so shaped on their edges as to groove and punch the holes at one ope- f. 947) ration. They are also graduated as to depth, by the four screws which pass through the flaunch above. *l l*, one of the side-steels. H, represents a horse shoe in the act of being grooved and punched. The machine for grooving and punching is precisely the same as the one for rolling or drawing the shoe to the required shape, with the exception of the upper swedge, as described above.

SHEET No. 3. Fig. 1. Elevation of machine for bending horse shoes. *a a a*, the frame; *b b*, the feet which supports the same; *c c*, the fly f. 948) wheel; *d*, the connecting rod; *e*, the crank shaft; *f f*, the rack; *g g*, the two shafts; K, the piece of iron round which the shoe is bent, having cogs on its edges, shaped so as to fit and mash into the piece K, while they revolve round on their respective shafts *g g*; M, the wheel which mashes and fits into the rack *f f*, and which communicates motion to the shafts *g g*, and pieces of iron K and L; N, a button or nipper which takes hold of the end of the horse shoe in conse- 531 f. 949) quence of its coming into contact with the piece of iron L, and holds it fast while it is in the act of bending; and when bent, said button or nipper strikes against the other side of piece L, which opens and lets the shoe drop. It will be observed that the shafts *g g* and pieces of iron K and L, does not make a full revolution.

Fig. 2. Plan or birds-eye view of machine for bending horse shoes. *a a*, the frame; *l*, the fly wheel; *e*, the crank shaft; *d*, the connecting f. 950) rod; *f*, a rack; *g g*, two shafts as seen at fig. 1; *m*, a wheel whose cogs mashes or fits into the rack *f;* L, the eccentric piece of iron which fits into the piece K, on which the shoe is formed as seen at figure 1 and 3; O, cap which confines the piece of iron, while in the act of bending around the piece K, as represented by the dotted lines of fig. 3.

Fig. 3. Section of the machine for bending horse shoes. K, a piece of cast or other iron shaped like a horse shoe, the upper side of which f. 951) having cogs placed upon it. This piece is fastened to the 623 shaft *g*, as also the wheel *k*, which mashes into the rack *f;* L, another piece of cast or other iron, fastened on the other shaft *g*, so shaped with cogs on the edges as to fit exactly into the cogs K. These two pieces, K and L ,are fastened on the shafts *g g*, with their reversed sides up from what they appear in the drawing. The dotted lines represent a cap which is fastened on the piece of iron L, with screw bolts. This f. 952) cap is about one inch thick, and serves the purpose of keeping the iron close up while in the operation of bending around the piece of iron K.

Having described the drawings, I shall now proceed to explain the nature of the operation: And firstly, (sheet No. 1, fig. 1,) represents a section or birds-eye view of the machine, having the upper roller, *i*, removed, as seen at *i*, fig. 2, so as to show more distinctly the interior arrangement of the machine. Supposing a pulley of about 4 feet diameter were bolted to the arms of the fly wheel *c*, (which I omitted 533

f. 953) to show in the drawing,) and to which motion were communicated by a leather strap or belt, from a corresponding pulley on a shaft connected with a water wheel or other power; it is evident that every revolution of the fly wheel, *c*, would move the carriage or moving frame *f f*, backwards and forwards, giving motion to the different parts of the machine as described and shown by the two figures of the above named sheet. And supposing the crank *e e*, by the connecting rod *d*, had pulled or drawn the moving frame *f f* forward, so as to cause the button f. 954) or cam *m* to strike against the stop *n*, the cam *o* would also strike against the stop *p*, and consequently push back or open the moving jaw *k*, which turns on a pivot at the other end; and supposing the moving frame *f f* were pushed back on the trasses *x x*, and towards the last part of the motion a hot piece of iron (previously rolled to the desired size) were introduced between the side steels or irons *l l*, it is evident that the cutter box *u u u* would strike against the stop *w*, and press f. 955) up the chisel *t* against the chisel *s*, cutting off the neces- 534 sary length of iron to make the shoe; and should the moving frame be drawn forward by the crank *e*, the piece of iron being confined by the side steels or irons *l l*, on the sides would be rolled or shaped by the vertical steels or swedges E E, as seen at fig. 2, when the cam *m* would strike against the stop *n*, and permit the cam *o* to open the jaw *k*, and let the piece drop; the appearance and shape of which may be f. 956) seen as represented by H, fig. 2, sheet No. 2. I would remark that the drawing represents the machine as fitted to receive the iron (previously rolled) flat, a little thinner on one edge than the other, and the steels or swedges E E, (fig. 2, sheet No. 2,) are so ground or shaped as to roll or taper the piece H at each end, intended for the heels of the shoe; but I find by experiment that using the iron square, and so grinding the steel or swedges E E as to flatten or roll down the f. 957) middle of the piece, leaving the ends square for the heels of the shoe, makes the best shoe. 535

Secondly, having explained the process of cutting the bar or rod into suitable lengths, and rolling or shaping the same suitable for horse shoes, I shall now proceed to describe the manner of grooving or punching them; and having already stated that the machine for grooving and punching is precisely the same as the one above described for rolling or shaping the shoe, with the exception of the upper swedge, which is substituted by the swedge represented in sheet No. 2, figure 3. Sup- f. 958) posing a machine every way similar to the one for rolling or shaping the shoe as described under the first head, with the exception of the upper swedge, in lieu of which the one represented by sheet No. 2, figure 3, was substituted, the piece of iron which came from the first machine were introduced between the side steels or irons *l l*, and the machine set in motion, it is evident it would be grooved and punched, and drop out of the machine on the moving jaw K being opened, in f. 959) the same manner as the piece dropped out from the first machine as described under the first head.

Thirdly, having described the manner in which the piece is grooved

and punched, I shall now attempt to show how it is bent, which 536
is the last operation. The piece of iron being now rolled or shaped as
may be desired for a horse shoe, as also grooved and punched, is intro-
duced into the machine as shown and described by sheet No. 3; for a
complete understanding of the operation of bending, see figures 1, 2,
and 3 of said sheet, with the description thereof. Believing that the
f. 960) three sheets of drawings, together with the description thereof,
is sufficient to enable any person at all conversant with mechanics to
construct and operate my horse shoe machines, I will now proceed to
claim what I consider new and invented by me; and, first: I claim the
machine for rolling, drawing, or shaping horse shoes, as described and
represented by the two sheets of drawings Nos. 1 and 2, as a whole as
there arranged; namely, those parts called side steels or irons *l l*, which
confines the piece of iron intended for a horse shoe on the sides, while
f. 961) it is rolled or shaped by the vertical swedges EE. I also claim
the vibrating or reciprocating motion of moving frame *f f*, which gives
motion to all the other parts of the machine, which enables the 537
operator to feed up the iron intended for horse shoes to the stop H,
cutting it off accurately, and rolling or shaping them at the same
time.

And I wish it expressly understood, that I claim the above named
reciprocating motion, whether it be by side steels and swedges as above
named, or whether it be merely a pair of common grooved rollers, the
f. 962) one having a groove or channel turned or cut the shape of the
shoe, the other having a tongue so shaped as to fit the groove exactly,
the periphery of said tongue being so shaped as to roll the shoe thinner
at some points than others, as may be desired.

It will be observed that if two rollers as above named were connect-
ed together at the end by two pinions, and on the other end of one
were fastened a wheel (similar to the wheel M,) on one of the shafts *x*,
of the bending machine, as seen at sheet No. 3, figure 1, having a rack
f. 963) operating into said wheel connected to a crank in every respect
similar to the bending machine, it is evident that the said rollers 538
would move backward and forward, making such parts of a revolution
as the length of the crank might give them. I therefore claim said re-
ciprocating motion when applied to rolling or shaping horse shoes by
rollers. I do not claim the use of solid rollers in rolling horse shoes,
for I believe this has been done, or rather attempted to be done, which
has universally proved a failure, in consequence of not having recip-
f. 964) rocating motion to enable the operator to feed up the iron to a
stop so as to ensure the piece of iron intended for a horse shoe being
always in the proper place to the impression from the rollers.

Another reason why rolling horse shoes by solid rollers has failed, is
that the tongue of the one and the socket of the other are liable to
wear, consequently have to be laid aside; whereas, my method of
having the tongue or swedges, as also the socket, divided into sections,
which allows the whole being ground, repaired and removed at plea-
f. 965) sure, by screws, so as to ensure the sides of the socket fitting

close to the tongue, as also having one side of the socket mov- 539
able, to allow the shoes being discharged. I also claim the method of having those parts of the machine, which confines the iron on the sides represented as side steels marked *l l*, movable so as to permit their being ground, (when worn,) at the same time moving them close up to swedges EE by screws. I also claim the plan of making the rollers f. 966) *i i*, sheet No. 1, figure 2, with an open mortise so as to permit the swedges DD being moved. In fine, I claim the method of dividing the working parts which roll or shape the shoe into such section as enables me to grind, replace, or remove them at pleasure, in lieu of solid rollers, which when worn have to be laid aside altogether. I wish it particularly understood that I do not confine myself to the precise method of operating the machine for rolling or shaping horse shoes, as represented by the drawing hereunto annexed, as in lieu of the frame f. 967) *f f* being moved, it may be made stationary, and the rollers *i i* moved backwards and forwards in slides, with corresponding 540 movements given to the other parts which would produce analogous results.

Secondly. I claim the machine for grooving and punching horse shoes, as represented by the drawings and description thereof; that is to say, I claim the manner of confining the piece of iron intended for a horse shoe between the side steels *l l*, while in the act of grooving and punching by the upper swedge D, having the pieces of steel fastened f. 968) under the caps *i i*. I also claim the vibrating or reciprocating motion of the machine in grooving and punching, for the same reasons as set forth in my claim to the machine for rolling or shaping.

I wish it understood I do not claim the rolling a plain groove or channel along the one edge or side of a bar of iron intended for horse shoes, for I believe this has been done; but I do claim the manner of so shaping the edge of the steel as to leave projection for the head of the nails, as in all cases, even when made by hand, the groove is first f. 969) made, then the holes; but by my plan I make both at once, which *seems* the double purpose of adding strength to the punches by being formed on and composing part of the steel which forms the groove or channel, as also performing both operations at once. I also claim the method of fastening the two pieces of steel which grooves 541 and punches the shoe under the caps *i i*, which permits their being screwed down by the four screws when necessary, in consequence of their becoming short by filing or other causes. And as I deem the dis- f. 970) covery of forming the projections or punches on the same piece of steel which grooves or channels the shoe of great importance, I shall describe the manner in which it is done. I take a piece of cast or other steel, previously rolled or hammered to at about one-fourth of an inch in thickness, about four inches wide, and as long as necessary to form the groove on one side of the shoe. I then grind, or reduce the edge by a file to a proper shape to form the groove, then mark off f. 970) where I want the projections or punches, filing down the 542 spaces between the projection so as to give them sufficient length to

form the holes, which adds great strength to the punches, compared with the method of inserting small pieces of steel into a roller to form punches as has been proposed, although I believe never carried into effect from its impracticability.

Thirdly, I claim the machine for bending horse shoes, as represented and described by the drawings thereof, in every particular as there arranged. And in addition to which I claim any other method of bending horse shoes, so long as the piece is taken hold of by one end, while the f. 972) other is bent round the mould, no matter whether the mould revolves round or is stationary, and the piece of iron is pulled or bent round it.

I also claim in a particular manner the placing the face of the mould downwards so as to permit the shoe to drop or discharge itself. I wish it also expressly understood, that I claim the using a piece of flat iron, as represented by the dotted lines (see sheet No. 3, fig. 3,) for the purpose of keeping the shoe close up to the mould while in the act of f. 973) bending; I also claim the nipper or button N, (see sheet No. 3, fig. 3,) which closes and holds fast the end of the horse shoe 343 by striking against the piece *L*, while in the act of bending round the shoe shape *K*, and which opens in consequence of its coming in contact with the other sides of the piece *L*, and lets the shoe drop.

I also claim the manner of making the gearing or wheels connected with the pieces of iron *K* and *L*, eccentric, or so shaped as to have the f. 974) pitched line describe the same circle as the shoe, otherwise the shoe would not bend regular.

It will be observed that although the gearing is by no means round, nevertheless it operates accurately, while they revolve round on their respective shafts.

In witness whereof I hereunto subscribe my name, this third day of October, 1835. HENRY BURDEN.

Witnesses—
CH. M. DAVIS,
JNO. CUSHMAN.

Patent Office. Received 13th September, 1839, and recorded 544 anew in this office, in conformity with the act of Congress, [L. S.] passed 3d March, 1837.

HENRY L. ELLSWORTH,
f. 975) *Commissioner of Patents.*

Complainant's exhibit No. 6.

No. 3261.

THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas Henry Burden, Troy, New York, has alleged that he has invented a new and useful improvement in the machine for making

horse shoes, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or dis-
f. 976) coverer of the said improvement, and that the same hath 545 not, to the best of his knowledge and belief, been previously known or used; has paid into the treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Henry Burden, his heirs, administrators, or assigns, for the term of fourteen years, from the fourteenth day of September, one thousand eight hun-
f. 977) dred and forty-three, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Henry Burden, in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

f. 978) Given under my hand at the city of Washington, this fourteenth day of September, in the year of our Lord one thou-
[L. S.] sand eight hundred and forty-three, and of the independence of the United States of America the sixty-eighth. 546

A. P. UPSHUR,
Secretary of State.

Countersigned and sealed with the seal of the Patent Office.

HENRY L. ELLSWORTH,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.

To all to whom it may concern:

Be it known that I, Henry Burden, of the city of Troy, in the county of Rensselaer, and State of New York, have made certain improvements in the machine for manufacturing horse shoes, for which machine I originally obtained letters patent of the United States, under date of the twenty-third day of November, 1835; and I do hereby de-
f. 979) clare that the following is a full and exact description of 547 my said improvements thereon.

In the machine as originally patented by me, the rod or bar of iron from which a shoe was to be made was cut off above the gripping dies or side steels, between which it was to be gripped and held whilst it was rolled and fashioned by the segment swedges; and after being cut off it was allowed to fall between them. In my improved machine, the rod or bar is passed directly in between them, the gripping dies, and is
f. 980) cut off by a cutter on a level with and at the outer end of said dies. It was found impracticable, also, in the machine as originally

constructed, to draw out and distribute the metal by the action of the segment dies used in that machine, so as effectually to fill the space between the gripping pieces, and thereby to give to the metal the proportionate thickness and width requisite in its different parts. In my improved machine this difficulty is obviated by giving to the swedges a
f. 981) somewhat greater extent of motion than is given in the same time to the sliding frame, by which means they exert a rubbing or drawing power on the metal, drawing it from the cutting end 548 towards the rear, and thereby fill the space between the gripping dies.

In my original plan, the machine by which the iron was grooved and punched was distinct from that by which the rolling and drawing were effected. In my improved machine, both of these operations are performed in succession on the same machine, thereby greatly diminishing the time required for their performance, preventing the loss of heat,
f. 982) and insuring greater accuracy in the work. In the accompanying drawing, fig. 1 is a perspective view of the whole machine; fig. 2 is a side elevation, and fig. 3 a top view or plan thereof. A A is the main frame, and B B a sliding frame, which is made to traverse back and forth upon the main frame by action of the crank C.

This and the general construction of my machine is similar to that first patented by me, but the sliding frame is longer, and moves to a
f. 983) considerably greater distance. D D is the rack which 549 is bolted into the sliding frame; and into this rack the wheels E E mash, as they do likewise into the lower wheel G and H; the wheels E and F being wide enough on the face to engage both with the rack and the lower wheels. I is the stationary, and J the movable gripping die, which are shown separately in fig. 4, the movable die being represented as open; K is the cutter on the movable die J, which operating against the end *a* of the stationary die I, cuts off the iron rod. In the
f. 984) position of the machine shown in figs. 1, 2, and 3, the cut off piece is being acted upon by the rolling and drawing segment dies L and M; and after passing these it is to be acted upon by the grooving and punching die N; the piece being sustained by the lower segment die O. When the piece has thus passed these segment dies, the gripping dies will open, and the iron will be then prepared for the bending machine, which is the same with that formerly used by me, and fully described in the specification of the above named letters patent. The
f. 985) opening and closing of the dies are effected in substan- 550 tially the same manner as in my original machine.

To give to the segment dies L and M the requisite drawing action, I in general arrange the shafts of the wheels G and H so that they shall not be parallel to each other, as shown in the segment fig. 5. In doing this the inner ends P P of the shafts, which carry the segment dies L and M, are to be at a greater distance from each other than their oppo-
f. 986) site ends P P; the distance of the peripheries of the segment dies from their centres is to be proportionately increased, and the desired end will be thereby accomplished; as the peripheries of the segment dies thus constructed will be made to travel somewhat faster than the

sliding frame. A like end may be attained by placing the shafts of the segment dies parallel to each other, and so gearing the wheels and rack as that the segment dies shall move faster than the carriage ; but the former method is the most simple and is perfectly effective. 551

Having thus fully described the nature of my improvements in the
f. 987) machine for manufacturing horse shoes, what I claim as new therein, and desire to secure by letters patent, is, first, the manner of combining and arranging the cutter and gripping dies in the said machine, so that the former be in the same plane with the latter, thereby allowing the bar of iron to be passed directly in between, as herein described and represented.

Secondly. I claim the causing of the peripheries of the segment dies L and M to travel faster than the sliding frame and the gripping dies, for the purpose and in the manner above made known.

f. 988) Thirdly. I claim the manner of combining the segment dies for drawing out and distributing the metal with those for grooving and punching it, so that the piece of metal shall be carried directly from the former to the latter by a continued movement of the sliding frame.

And for a full description of those parts of the said machine which it has not been thought necessary to present in the present specification, I hereby refer to the original patent above named. 552

HENRY BURDEN.

Witnesses—THOS. P. JONES,
EDWIN L. BRUNDAGE.

Complainant's exhibit No. 7.

f. 989) List of stockholders in 1841.

I. & J. Townsend, Ebenr. Irvin, exect. est.	5 shares	- - -	$30,000 00
Wm. Irvin, dec'd	2 do.	- - -	12,000 00
E. F. Backus	3 do.	- - -	18,000 00
Nath'l Adams	2 do.	- - -	12,000 00
James Sword	2 do.	- - -	12,000 00
Henry Burden	2 do.	- - -	12,000 00
	16		$96,000 00

f. 990) List of stockholders in 1845.

I. & J. Townsend	3 shares	- - -	$18,000 00
Henry H. Martin	1 do.	- - -	6,000 00
Isaiah Townsend	1 do.	- - -	6,000 00
E. F. Backus	3 do.	- - -	18,000 00
Henry Burden	8 do.	- - -	48,000 00
	16		$96,000 00

553

f. 991) List of stockholders in 1847.

John Townsend	2 shares - - -	$12,000 00
Franklin Townsend	1 do. - - -	6,000 00
Henry H. Martin	1 do. - - -	6,000 00
Isaiah Townsend	1 do. - - -	6,000 00
E. F. Backus	3 do. - - -	18,000 00
Henry Burden	8 do. - - -	48,000 00
	16	$96,000 00

List of stockholders in July, 1848.

Henry Burden	8 shares - - -	$48,000 00
Andrew White	1 do. - - -	6,000 00
P. T. Heartt	1 do. - - -	6,000 00
P. A. Burden	6 do. - - -	36,000 00
	16	$96,000 00

554

f. 992) List of stockholders in June, 1849.

P. T. Heartt	1 share - - -	$6,000 00
James Roy	3 do. - - -	18,000 00
P. A. Burden	12 do. - - -	72,000 00
	16	$96,000 00

And I, the said commissioner, do hereby certify, that each and all 555 the witnesses hereinbefore named as having been sworn were respectively duly sworn on their oath publicy administered by and before me, that their respective answers and evidence as hereeinbefore set forth should be the truth, the whole truth, and nothing but the truth; and their said f. 993) testimony was thereupon taken and reduced to writing and subscribed by the respective witnesses in my presence; that so much of the said evidence as consists of admissions of the respective parties was herein inserted by the mutual request and directions of all the counsel of the respective parties herein first above named for their mutual convenience; and that the preceding exhibits on the part of the complainant, marked from No. 1 to No. 7 inclusive; and exhibits on the part of the defendants, marked from A to AE inclusive, were taken and appended by f. 994) like mutual consent of counsel; and that the said evidence was so taken, said admissions so made, and said exhibits so taken and appended, on the respective days above from time to time noted, all other objections thereto being waived by the respective counsel, except such objections as are expressly above set forth or mentioned. 556

AZOR TABER, *Commissioner.*

At a special term of the circuit court of the United States, for the northern district of New York, in equity, held at the city of Utica, in

said district, on the fourth day of September, one thousand eight hundred and fifty. Present, the honorable Samuel Nelson, justice.

f. 995) The TROY IRON and NAIL FACTORY
vs.
ERASTUS CORNING, JOHN F. WINSLOW, and JAMES HORNER. } In equity.

This cause having heretofore been brought to a hearing upon the pleadings and proofs, and counsel for the respective parties having been heard, and due deliberation thereupon had, and it appearing to the said court that the said Henry Burden was the first and original inventor of the improvement on the spike machine in the bill of complaint mentioned, and for which a patent was issued to the said Henry Burden, bearing date the 2d September, 1840, as in said bill of complaint f. 996) set forth, and that the said complainants have a full and perfect title to the said patents for said improvements by assignment from the said Henry Burden, as is stated and set forth in the said bill of complaint:

But it also further appearing to the court on the pleadings and proofs, that the instrument in writing, bearing date the 14th October, 1845, stated and set forth in the said bill of complaint, and also in the answer of the said defendants thereto, entered into upon a settlement and compromise of certain conflicting claims between the said parties, and f. 997) among others of mutual conflicting claims to the improvements in the spike machine in said bill mentioned, and when said instrument was executed by the said Henry Burden, of the one part, and the said defendants of the other; the said Henry Burden at the time being the patentee and legal owner of the said improvements, and fully authorized to settle and adjust the said conflicting claims, did, in legal effect, and by just construction, impart, and authorize, and convey, a right to the defendants to use the said improvements in the manufacture of the f. 998) hook-headed spike, without limitation as to the number of machines so by them to be used, or as to the place or district in which to be used.

Therefore, it is ordered, adjudged, and decreed, that the said bill of complaint be, and the same is hereby, dismissed, with costs to be taxed, and that the defendants have execution therefor.